

OPTIMIZE MOTOR CONTROL



BROCHURE

Absolute Encoder
Incremental Encoder
Magnetic Rotary Encoder



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2005

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Factory View



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NIETZ always aims to be the professional driving solution provider and your mutual-benefit partner. «



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■ 光电编码器
Brief introduction of encoder

编码器是集精密光学、精密机械及微电子技术为一体的高科技产品。编码器通过光电转换原理用来采集机械的旋转角度、位置、速度及加速度等数据，将这些数据传送给中心控制器，可实现自动化控制。因此广泛应用于机械、机床制造业、电梯、造纸印刷、包装机械、起重等自动化领域。

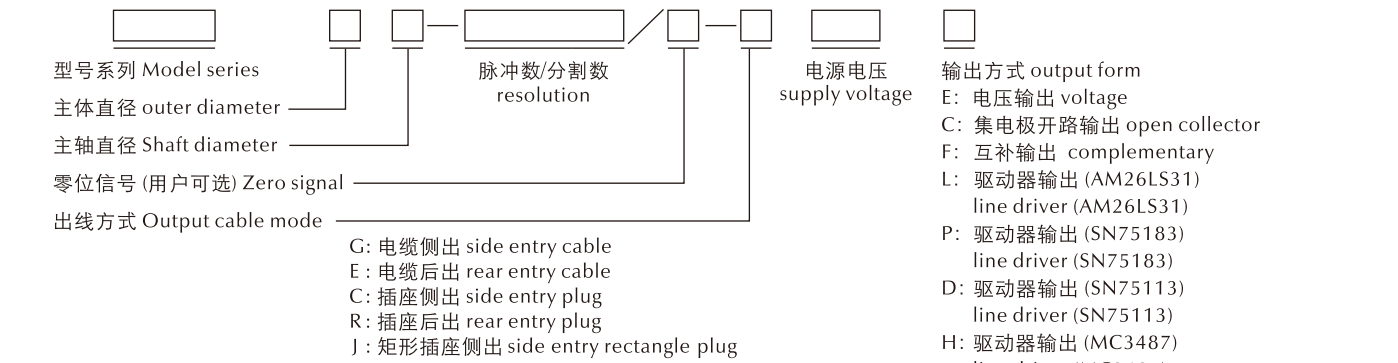
The encoder is a kind of high-tech product, concentrated on precise optic and precise machinery and tiny electric. It collects the rotate angle, position, speed and accelerated speed of the machine through the principle of transform between optic and electric. Then transmitting the data to the center controller in order to realize automatic control. So it is widely used in the automatic area such as machinery, machine-tool industry, elevator, papermaking, printing, packing, crane and so on.

■ 增量式编码器
Incremental encoder

- 1、增量式编码器轴旋转时，有相应的脉冲输出，其旋转方向的判断和脉冲数量的增减需借助外部的判向电路和计数器来实现。
- 2、其计数起点可任意设定，并可实现多圈的无限累加和测量。 还可以把每转发出一个脉冲的Z信号， 作为参考机械零位。
- 3、编码器的轴转一圈会输出固定的脉冲。对于光学旋转编码器， 输出脉冲数与编码器光栅的刻线数相同。需要提高分辨率时， 可利用90° 相位差的A、B两路信号， 对原信号进行倍频。

1. It will output corresponding resolution when the shaft of incremental encoder revolves. The revolve direction's judgement and the add or subtract of pulse number needs the help of "Judge Direction Circuit" and counter to realize.
2. The start point of the counter can be set freely. It can also realize multi-circles unlimited accumulation and measurement. We can regard Z signal as counter's reference point.
3. When the encoder goes a round, it will output a fixed pulse, number which is same as the resolution. When it needs to raise the resolution, we can interpolate to original signal,using A and B signals of the 90° phrase shift.

■ 增量式编码器型号标注含义
Explanation of model of mcremental encoder



■ 特点与应用 Feature and Application

- 1、具有体积小、安装方便、抗干扰性强。
- 2、高转速：最高可达6000rpm，高频响0~100kHz。应用户要求最高可达300KHz，有此要求时，订货请注明。
- 3、分辨率范围宽：10~10000P/R，标准应用温度-10℃~70℃。
- 4、轴载荷能力强、耐冲击、抗震好、可靠性高、工作寿命长。
- 5、带短路保护电路，驱动器输出，延长信号传输距离，增强抗干扰能力。
- 6、应用于自动控制、自动测量等自动化领域中。如数控机床、伺服电机、高速电梯、机器人、轧钢机械、纺织机械、印刷机械、轻工机械、汽车工业、金融电子、加油机、流量机、试验机及办公室自动化仪器仪表等行业。
1. Small size, easy installation, strong ability of resistance.
2. High rotating speed, max up to 6000rpm, frequency response 0 - 100KHZ, it can be up to 300KHz according to the clients. If request this, please note when order.
3. Wide range of resolution: 10 - 10000P/R, Standard operating temperature -10 - 70℃.
4. Strong ability of shaft load, shock resistance, vibration resistance, high reliability, long working life.
5. It has short-circuit protection circuit, line driver output improve ability of interference resistance and can extend the distance of signal transmission.
6. It is widely used in automatic area of automatic control and automatic measurement , such as CNC machine tools, servo motor, high-speed elevators, robot, rolling machinery, textile machinery, printing machinery, light industry machinery, automobile industrey, financial electronics, tanker, flow machine, testing machine and office automatic instruments.

■ 编码器输出方式、代号、电路及波形
Output form, code, output circuit, wave form

信号输出方式 Output form	代号 Code	输出 电路 Output circuit	波 形 Wave form
集电极 开路输出 Open collector	C		当输出端与外拉高电平之间跨接（负载）时，输出波形同F。 The output wave form the same as F.
互补输出 Complementary	F		
电压输出 Voltage	E		
长 线 驱动器输出 Line driver	D		
	L		
	P		
	M		
	H		
		$Q=A.B.Z.$ $\bar{Q}=\bar{A}.\bar{B}.\bar{Z}.$	
U、V、W U. V. W output			

■ 输出波形与信号位置精度
Output wave form and signal position accuracy

从轴头方向顺时针（CW）波形图
clockwise(cw) waveform viewed
from the shaft head.

● 波形比：X₁+X₂=0.5T±0.1T
Waveforms ratio: X₂+X₃=0.5T±0.1T

● A、B相位差：X_n≥0.125T (n=1, 2, 3, 4)
A, B phase shift: X_n≥0.125T (n=1, 2, 3, 4)

● 信号位置准确度
Signal position accuracy
A、B绝对角度误差≤0.2T
A, B absolute angle error: ≤0.2T

● 周期误差：≤0.05T
Duty error: ≤0.05T

● 零位信号：T_z=1T±0.5T
Zero signal width:T_z=1T±0.5T

● T=360/N (N为每转输出脉冲数)
T=360/N (N is pulse number output per rotation)

● A、B相与Z相的位置关系不作规定
The position relationship between A. B and C phase is not ordered.

■ 分辨率 Resolution

名称 Name	规格 Pulse number
每转输出脉冲数 P/R	6 10 20 25 30 40 50 60 90 100 120 125 150 240 256 300 320 360 400 500 512 600 720 750 800 900 1000 1016 1024 1080 1200 1250 1270 1500 1600 1800 2000 2048 2160 2400 2500 3600 4096 5000 5400 或按客户需求 (or on request)

■ 电气参数 Electronic data

型式记号 Marker	电源电压 Voltage DC(V)	消耗电流 Current consumption (mA)	输出方式 Output form	输出电压 Output voltage		注入电流 Injection current (mA)	最小负载阻抗 Impedance (Ω)	上升、下降时间 Rise/fall time (μs)	响应频率 Frquency response (KHz)
				V _H	V _L				
05E	5±0.25	≤100	电压输出 Voltage	≥3.5	≤0.5	—	—	≤1	0~100
05C	5±0.25	≤100	集电极开路输出 Open collector	—	—	≤30	—	—	0~100
05F	5±0.25	≤100	互补输出 complementary	≥3.5	≤0.5	—	—	≤1	0~100
05P	5±0.25	≤100	驱动器SN75183 Line driver SN75183	≥2.5	≤0.5	—	—	≤0.1	0~100
05L	5±0.25	≤100	驱动器AM26LS31 Line driver AM26LS31	≥2.5	≤0.5	—	—	≤0.1	0~100
05H	5±0.25	≤100	驱动器MC3487 Line driver MC3487	≥2.5	≤0.5	—	—	≤0.1	0~100
05D	5±0.25	≤100	驱动器SN75113 Line driver SN75113	≥2.5	≤0.5	—	—	≤0.1	0~100
12M	12±1.2	≤150	驱动器MM88C30 Line driver MM88C30	≥8	≤0.5	—	—	≤0.1	0~100
12E	12±1.2	≤150	电压输出 Voltage	≥8	≤0.5	—	—	≤1	0~100
12C	12±1.2	≤150	集电极开路输出 Open collector	—	—	≤30	—	—	0~100
12F	12±1.2	≤150	互补输出 complementary	≥8	≤0.5	—	≥500	≤1	0~100
15E	15±1.5	≤150	电压输出 Voltage	≥10	≤0.5	—	—	≤1	0~100
15C	15±1.5	≤150	集电极开路输出 Open collector	—	—	≤30	—	—	0~100
15F	15±1.5	≤150	互补输出 complementary	≥10	≤0.5	—	≥500	≤1	0~100
24E	24±2	≤150	电压输出 Voltage	≥20	≤0.5	—	—	≤2	0~100
24C	24±2	≤150	集电极开路输出 Open collector	—	—	≤30	—	—	0~100
24F	24±2	≤150	互补输出 complementary	≥20	≤0.5	—	≥500	≤2	0~100
T	8~30	≤150	特殊驱动器 Special line driver	≥18	≤0.5	—	—	≤0.1	0~100

■ 驱动器与接收器匹配表 Driver and receiver matching table

代号 Code	驱动器 Driver	接收器 Receiver
D	SN75113	SN75115
L	AM26LS31	AM26LS32
P	SN75183	SN75182
M	MM88C30	MM88C29
H	MC3487	MC3486

■ 电路输出与连接 Circuit output and connection

集电极开路输出 Open collector	电压输出 Voltage	互补输出 Complementary	线性驱动器输出 Line driver
编码器 Encoder	连接 Connection	编码器 Encoder	连接 Connection

■ 绝对式编码器 absolute encoder

- 1、绝对式编码器轴旋转时，有与其位置一一对应的代码（二进制、BCD码等）输出。从代码大、小的变更，即可判断正反方向和转轴所处的位置，而无需判向电路。

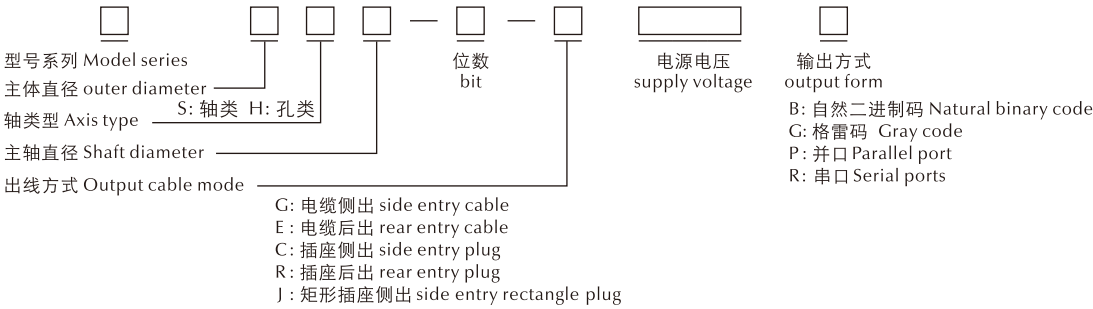
2、它有一个绝对零位代码，当停电或关机后，在开机重新测量时，仍可准确地读出停电或关机位置的代码，并准确地找到零位代码。

3、一般情况下，绝对式编码器的测量范围 0°~360°，但特殊的型号也可实现多圈测量。
1. When the absolute encoder revolves, it will output corresponding code(binary or BCD code) with its location. It can judge the pros and cors direction and location of shaft according to big and small change of the code and do not need "Judge Direction Circuit".

2. It has an absolute zero code, and it can read out the position code when power cut or power off and can find the zero code accurately.

3. Generally, measurement range of absolute encoder is 0°~360°, but special model can realize multi-circles measurement.

■ 绝对式编码器型号标注含义 Explanation of model of absolute encoder



■ 安装使用及注意事项

- 1、光电轴角编码器属于高精度仪器，安装时严禁敲击、摔打和碰撞。安装或使用不当会影响编码器的性能和使用寿命。

2、编码器实心轴与外部联接应避免刚性连接，而应采用弹性联轴器、尼龙齿轮或同步带连接传动。避免用户轴的窜动、跳动、造成编码器轴系和码盘的损坏。

3、安装编码器空心轴与电机轴应是间隙配合，不能过紧或过松，定位键也不得过紧，严禁敲打装入。

4、有锁紧环的编码器在装入电机轴前，严禁锁紧，以防止轴壁永久变形，避免编码器因此造成的装卸困难。

5、应保证编码器轴与用户输出轴的不同轴度<0.20mm，两轴线的偏角<1.5°。

6、安装时注意其允许的轴负载，不得超过极限负载。

7、注意不要超过极限转速，如超过极限转速时，电信号可能会丢失。编码器正常工作时的极限转速 $N_{max} = \frac{60f}{L}$ r/min (L为光栅刻线数，f为最大响应频率)。

8、接线务必正确，错误接线会导致内部电路损坏。

9、编码器屏蔽线良好接地，以防电磁干扰，影响正常使用。

10、请不要将编码器的输出线与动力线等绕在一起或同一管道传输，也不宜在配线盘附近使用，以防干扰。

■ Installation and Notes

1. Photo electric rotary encoder is high-precision instrument. During the installation, percussion, toughen, collision are forbidden. If installed or used improperly, it will affect the function and working life.

2. The shaft of encoder is not wanted the rigidity to link with the external, please use elastic coupling, nylon gear or belt for connection to avoid the damage of encoder shaft and codewheel because of users shaft-jumping.

3. It will be gap matching between the hollow shaft and motor shaft. It won't be too tight or slack. The keyway button shouldn't be too tight. Beating installation is not allowed.

4. Tight locking is forbidden before the encoder with locking ring install into the motor shaft in order to avoid shaft wall deformed forever, that make it hard for loading and unloading.

5. It should be ensure nonconcentricity between encoder shaft and user's shaft is less than 0.20mm, shaft deflexion is less than 1.5°.

6. During the installation, please pay attention to the shaft load which is permitted. It can't be exceed the limited load.

7. Notice that don't exceed the limited speed. If exceed the limited speed, ECG will get lost. The normal operating limited speed $N_{max} = \frac{60f}{L}$ r/min.(L is resolution, f is Max frequency response)

8. Cable connection must be right. If wrong, it will lead the internal circuit damage.

9. Shield line should be well connected with the ground in order to avoid electromagnetism interference, then effects its using.

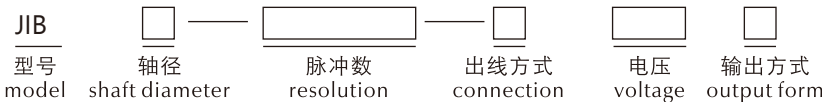
10. Please don't put the output line and power line together or in a tunnel, also not use it near the patch to avoid interference.

JIB Series



- 外径Φ38，止口Φ20，槽型切口
- 轴径Φ6×14，可选用SE或PE型联轴节
- 微小型，力矩小，多规格，经济实用
- Outer diameter Φ38, flange diameter Φ20, flute type incision.
- Shaft size Φ6×14, SE or PE coupling can be choosed.
- Smaller type, small torque, many specifications, economical and usful.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIB6-1024-G05E is shaft diameter Φ6, 1024P/R, side entry cable, supply voltage 5V, voltage output .

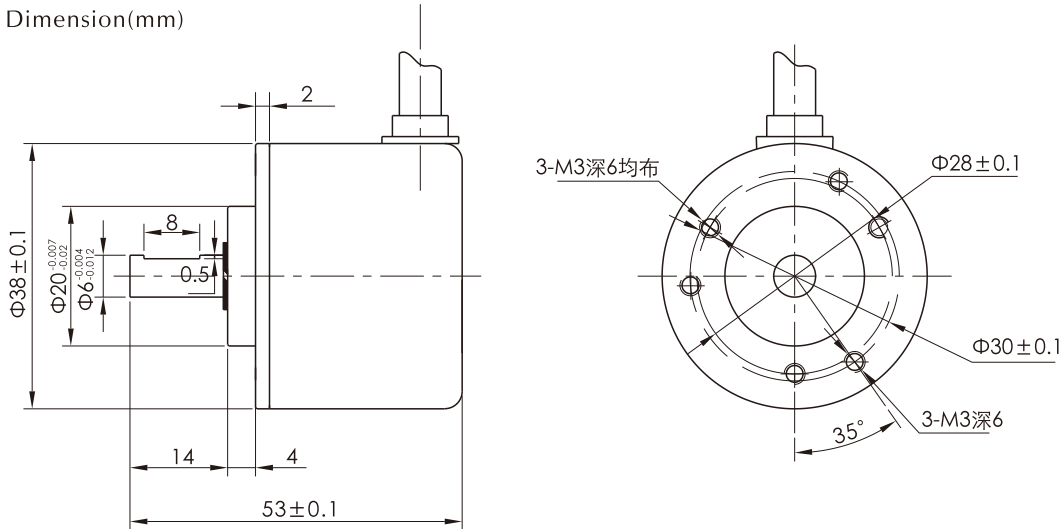
■ 技术参数 Technical data

分辨率 Resolution	10~2500P/R	转动惯量 Rotating inertia	4×10 ⁻⁷ kg · m ²
电源电压 Supply voltage	DC5V或8V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各3次)
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	1.5×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.1kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	L/D	VCC	0V	A	B	Z	Ā	Ē	Ē	FG

■ 机械尺寸 Dimension(mm)



JIB4a Series



- 外径Φ25或Φ30，止口Φ15，轴头D形切口
- 轴径Φ4×10，电缆后出
- 适用于医疗设备及小型数控装置
- Outer diameter Φ25 or Φ30, flange diameter Φ15, shaft head D-type incision.
- Shaft size Φ4×10, rear entry cable.
- Used for medical equipment and small numerical control device.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIB4a-200-G05E is shaft Φ4, 200P/R, side entry cable, supply voltage 5V, voltage output .

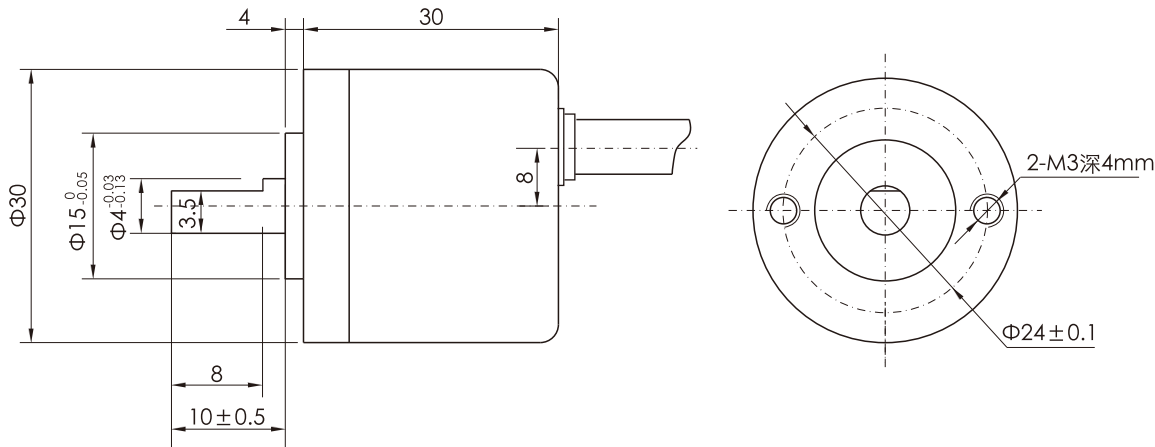
■ 技术参数 Technical data

分辨率 Resolution	10~200P/R	转动惯量 Rotating inertia	2×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC 4.5V~13.2V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各2次) 持续6mS
消耗电流 Current consumption	≤50mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	0℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.1kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	—

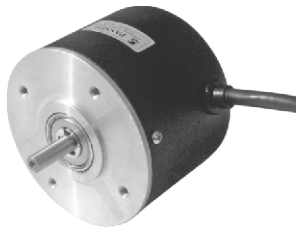
■ 接线表 Connection table

线色 Cable color		红 Red	黑 Black	白 Whith	绿 Green	黄 Yellow	屏蔽 Shield
输出形式 Output form	E	Vcc	0V	A	B	Z	FG

■ 机械尺寸 Dimension(mm)

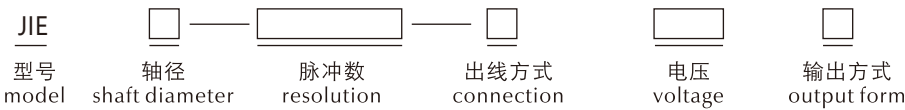


JIE Series



- 外径Φ66，止口Φ30，轴头D形切口
- 轴径Φ5×22，可加工成Φ6、Φ8、Φ10轴，可选用SE或PE型联轴节，电缆侧出或插座侧出
- 经济适用，力矩小，重量轻，多规格
- Outer diameter Φ66, flange diameter Φ30, shaft head D-type incision.
- Shaft size Φ5×22, shaft Φ6, Φ8, Φ10 available, SE or PE coupling can be choosed, side entry cable or side entry plug.
- Economical and useful, small torque, light weight, many specifications.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIE8-1024-G05E is shaft diameter Φ8, 1024P/R, side entry cable, supply voltage 5V, voltage output .

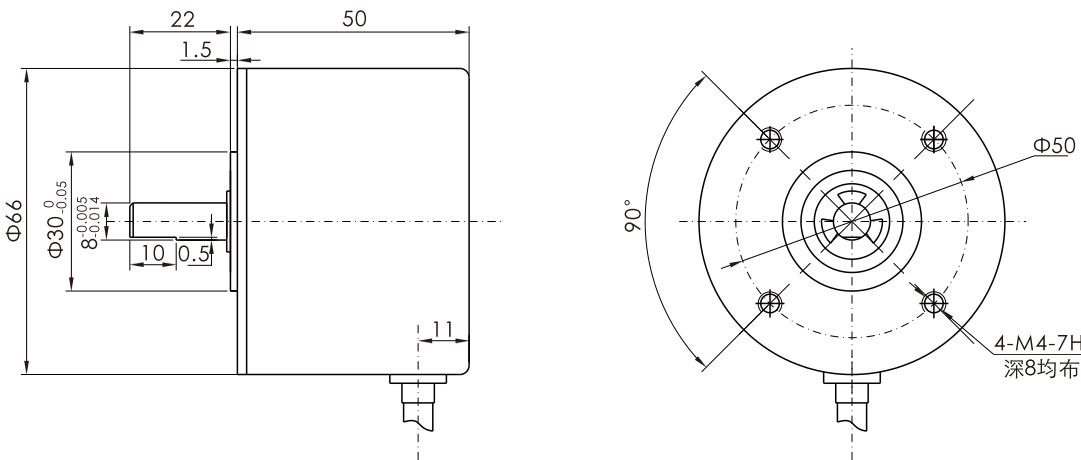
■ 技术参数 Technical data

分辨率 Resolution	10~5000P/R	转动惯量 Rotating inertia	3.5×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
7芯插座脚号 CX16K7P plug		1	7	3	4	5	—	—	—	6
9芯插座脚号 CX16K9P plug		4	3	1	2	5	8	9	6	7

■ 机械尺寸 Dimension(mm)

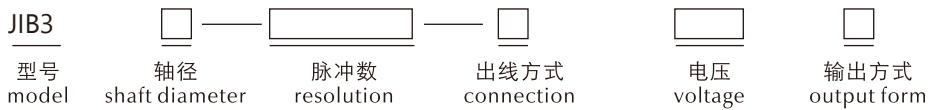


JIE3 Series



- 外径Φ66，止口Φ52，轴头D形切口
- 轴径Φ8×23，可加工成Φ10轴，可选用SE或PE型联轴节
- 适用于经济型数控机床
- Outer diameter Φ66, flange diameterΦ52, shaft head D-type incision.
- Shaft size Φ8×23, shaft Φ10 available, SE or PE coupling can be choosed.
- Used for economical CNC machine tool.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIE38-1024-C05F is shaft diameter Φ8, 1024P/R, side entry plug, supply voltage 5V, complementary output .

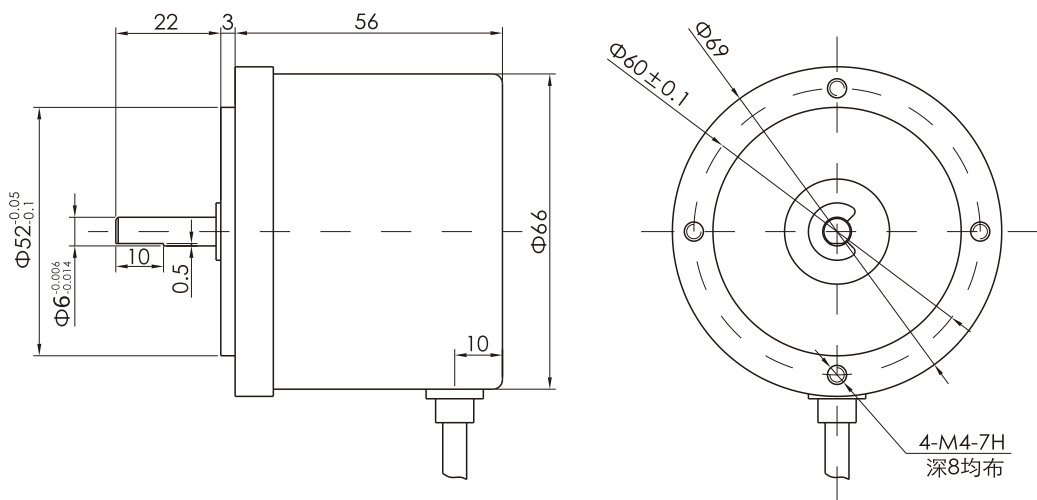
■ 技术参数 Technical data

分辨率 Resolution	10~5000P/R	转动惯量 Rotating inertia	4.2×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 30N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
7芯插座脚号 CX16K7P plug		1	7	3	4	5	—	—	—	6
9芯插座脚号 CX16K9P plug		4	3	1	2	5	8	9	6	7

■ 机械尺寸 Dimension(mm)

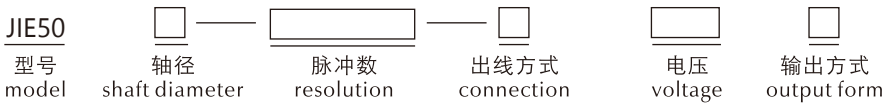


JIE50 Series



- 外径Φ50，止口Φ30或Φ25，轴头D形切口
- 轴径Φ8×15，可选用SE或PE型联轴节
- 小型，多规格，抗干扰性强
- Outer diameter Φ50, flange diameter Φ30 or Φ25, shaft head D-type incision.
- Shaft size Φ8×15, SE or PE coupling can be choosed.
- Small type, many specifications, good interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIE5008-1024-G(12~24)C is outer diameter Φ50, shaft diameter Φ8, 1024P/R, side entry cable, supply voltage 12~24V, open collector output.

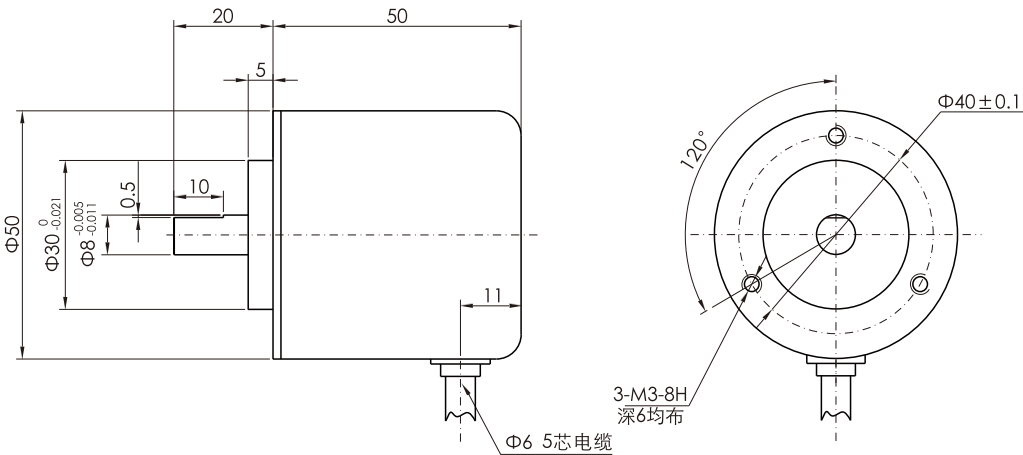
■ 技术参数 Technical data

分辨率 Resolution	100~5000P/R	转动惯量 Rotating inertia	4×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥V _{cc} ×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	1×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	SE/PE Coupling

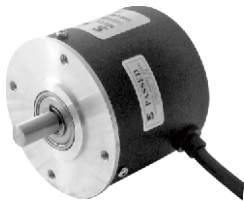
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
7芯插座脚号		1	7	3	4	5				6
9芯插座脚号		4	3	1	2	5	8	9	6	7

■ 机械尺寸 Dimension(mm)

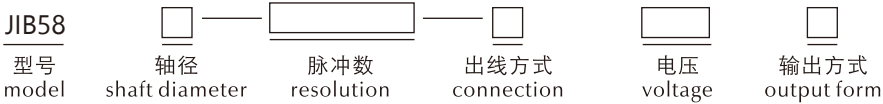


JIE58 Series



- 外径Φ58，止口Φ36，轴头D形切口
- 轴径Φ8×20，可选用SE或PE型联轴节
- 小型，高性能，抗干扰性强
- Outer diameter Φ58, flange diameter Φ36, shaft head D-type incision.
- Shaft size Φ8×20, SE or PE coupling can be choosed.
- Small type, high performance, good interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIE5808-1024-C05L is outer diameter Φ58, shaft diameter Φ8, 1024P/R, side entry cable, supply voltage 5V, line driver output.

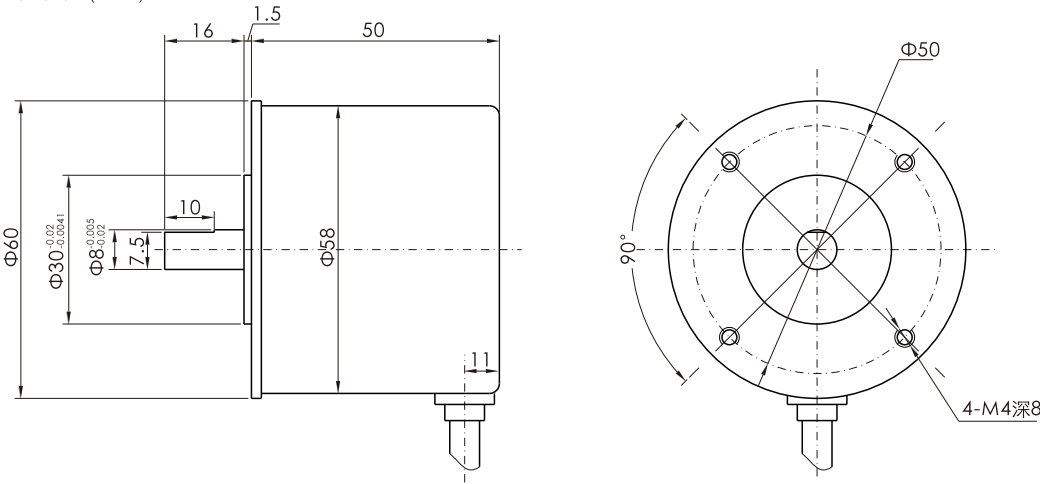
■ 技术参数 Technical data

分辨率 Resolution	500~10000P/R	转动惯量 Rotating inertia	4×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥V _{cc} ×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各3次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial)20N	附件 Accessories	SE/PE Coupling

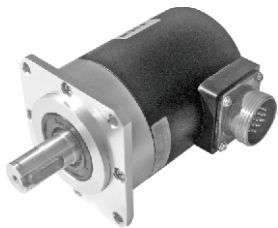
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	T	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
7芯插座脚号		1	7	3	4	5				6
9芯插座脚号		4	3	1	2	5	8	9	6	7

■ 机械尺寸 Dimension(mm)

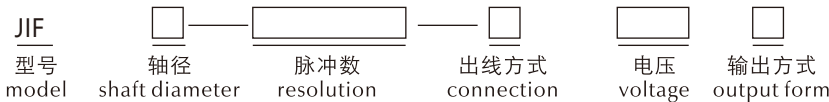


JIF Series



- 外径Φ66，止口Φ50，附方法兰68×68，插座侧出
- 轴径Φ15×30，带键槽，可选用SF或PF型联轴节
- 坚固，密封型，刚性好，承载能力大
- Outer diameter Φ66, flange diameter Φ50, square flange size 68×68 attached, side entry plug.
- Shaft size Φ15×30 with keyway, SF or PF coupling can be choosed.
- Sturdy, slealed, good rigid, strong capability of loading.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIF-1024-G05D is shaft diameter Φ15, 1024P/R, side entry plug, supply voltage 5V, line driver output .

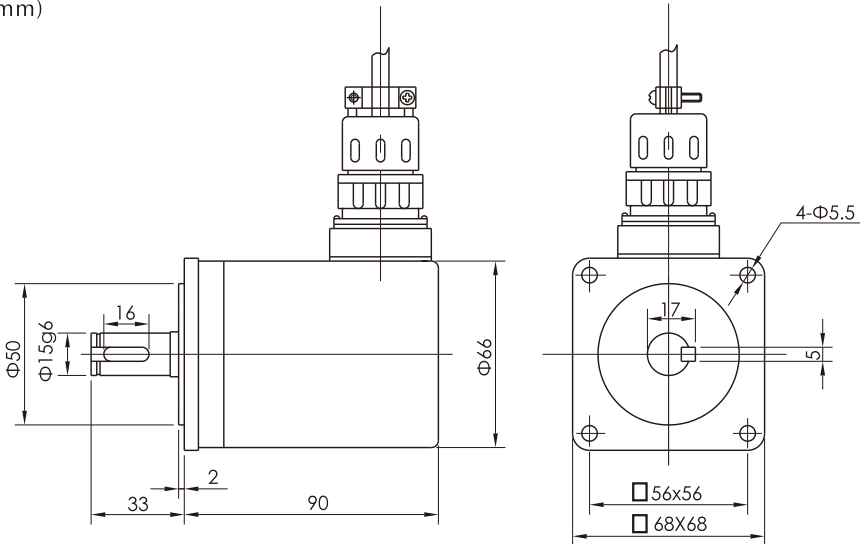
■ 技术参数 Technical data

分辨率 Resolution	10~5000P/R	转动惯量 Rotating inertia	1.3×10 ⁻⁵ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	5×10 ⁻² N · m(+25℃)	重量(不含线) Weight (no cable)	0.65kg
轴允许负荷 Shaft loading	径向(Radial) 50N 轴向(Axial) 50N	附件 Accessories	SF/PF Coupling

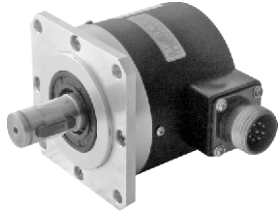
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
19芯插座脚号		8	10/12	1	3	2				17
19芯插座脚号		8	10/12	1	3	2	13	15	14	17
17芯插座脚号		H	K	A	C	B	N	R	P	E

■ 机械尺寸 Dimension(mm)

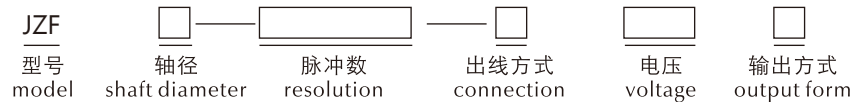


JZF Series



- 外径Φ66，止口Φ50，附方法兰68×68，插座侧出
- 轴径Φ15×28，带键槽，可选用SF或PF型联轴节
- 短小型，坚固，密封，刚性好，承载能力大
- Outer diameter Φ66, flange diameter Φ50, square flange size 68×68 attached, side entry plug.
- Shaft size Φ15×30 with keyway, SF or PF coupling can be choosed.
- Short type, Sturdy, slealed, good rigid, strong capability of loading.

■ 型号说明 Explanation of model



■ 型号举例 For example

JZF-1024-C05D is shaft diameter Φ15, 1024P/R, side entry plug, supply voltage 5V, line driver output .

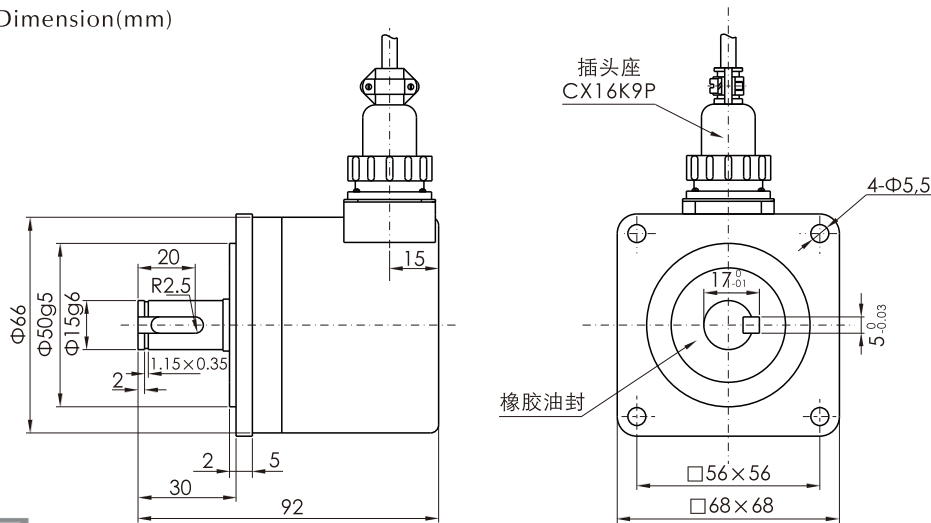
■ 技术参数 Technical data

分辨率 Resolution	10~5000P/R	转动惯量 Rotating inertia	6.5×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	5×10 ⁻² N · m(+25℃)	重量(不含线) Weight (no cable)	0.62kg
轴允许负荷 Shaft loading	径向(Radial) 50N 轴向(Axial) 50N	附件 Accessories	SF/PF Coupling

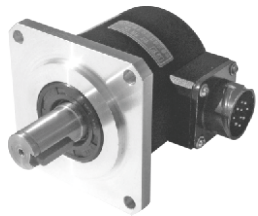
■ 接线表 connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG
7芯插座脚号		1	7	3	4	5				6
9芯插座脚号		4	3	1	2	5	8	9	6	7
19芯插座脚号		8	10/12	1	3	2				17

■ 机械尺寸 Dimension(mm)



JZF58 Series



- 外径Φ58，止口Φ50，附方法兰68×68，插座侧出
- 轴径Φ15×27，带键槽，还可加工成短型Φ58×44
- 小型，密封，坚固，抗干扰性强
- Outer diameter Φ58, flange diameter Φ50, square flange size 68×68 attached, side entry plug.
- Shaft size Φ15×27, with keyway, can process short kind sizeΦ58×44.
- Small type, slealed, Sturdy, good interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JZF5815-1024-C05D is outer diameter Φ58,shaft diameter Φ15, 1024P/R, side entry plug, supply voltage 5v, line driver output.

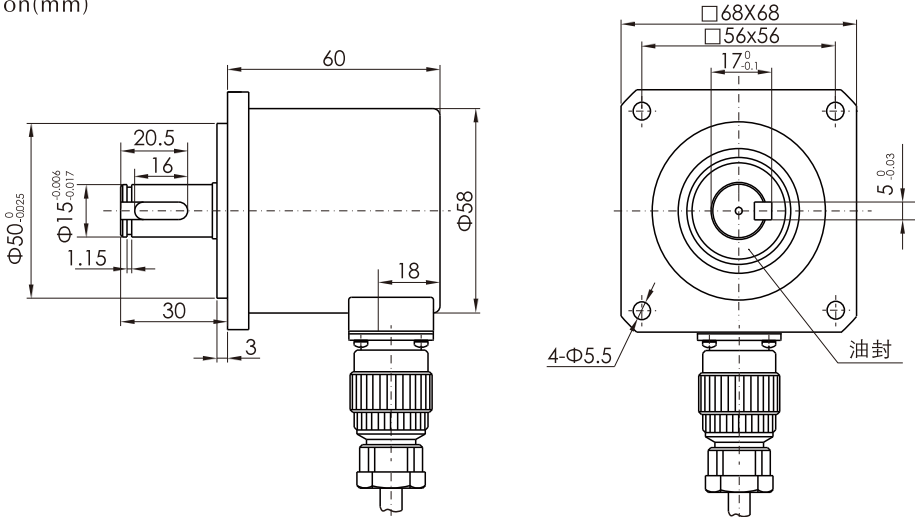
■ 技术参数 Technical data

分辨率 Resolution	500~8192P/R	转动惯量 Rotating inertia	6.5×10 ⁻⁶ kg·m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各3次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	5×10 ⁻² N·m(+25℃)	重量(不含线) Weight (no cable)	0.62kg
轴允许负荷 Shaft loading	径向(Radial) 50N 轴向(Axial) 50N	附件 Accessories	SF/PF Coupling

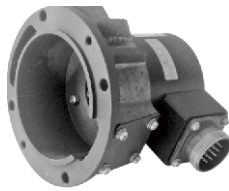
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	Ā	Ē	Z̄	FG
9芯插座脚号 plug		1	7	3	4	5	—	—	—	10
9芯插座脚号 plug		4	3	1	2	5	8	9	6	7
10芯插座脚号 plug		4	6	1	2	3	7	8	9	10

■ 机械尺寸 Dimension(mm)



JIM Series



- 外径Φ66，附圆法兰盘Φ100
- 轴径Φ6×10，可选用SE或PE型联轴节
- 多用于电机及数控机械，具有防滴结构
- Outer diameter Φ66, circle flange diameter Φ100 attached.
- Shaft size Φ6×10, SE or PE coupling can be choosed.
- Used for motor and numerical control machinery with the structure of guard against drops.

■ 型号说明 Explanation of model



■ 型号举例 For example

JIM-1024-C05E is 1024 P/R, side entry plug, supply voltage 5V, voltage output .

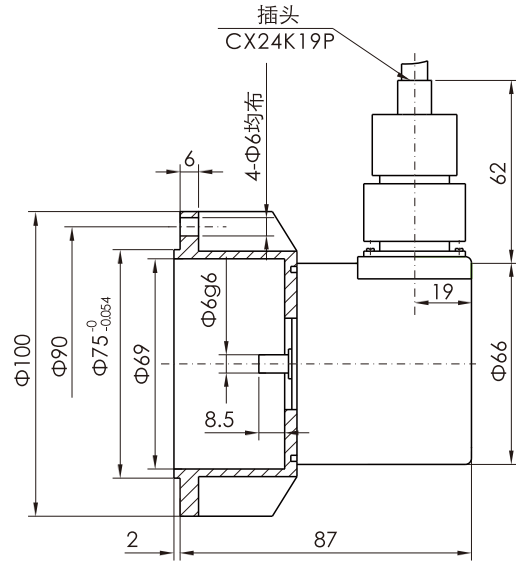
■ 技术参数 Technical data

分辨率 Resolution	10~5000P/R	转动惯量 Rotating inertia	3.2×10 ⁻⁶ kg·m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻³ N·m(+25℃)	重量(不含线) Weight (no cable)	0.4kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	Ā	Ē	Z̄	FG
19芯插座脚号		1	2	3	5	7	—	—	—	10
19芯插座脚号		1	2	3	5	7	4	6	8	10

■ 机械尺寸 Dimension(mm)

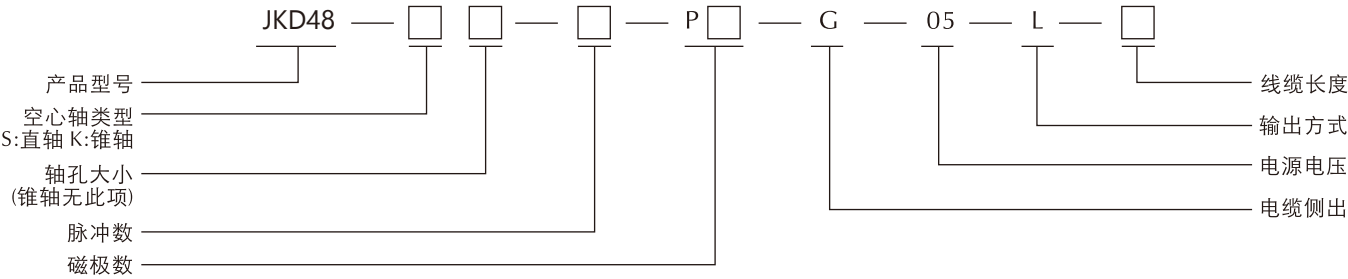


JKD48 Series



- 外形Φ48×35，空心轴Φ12，锥度1：10
- 适用于伺服电机，带U、V、W信号，板弹簧连接
- 可靠性高，抗干扰性强
- Shape size Φ48×35, hollow shaft Φ12, 1: 10 taper.
- Used for servo moter, with U.V.W signals, elastic mounting plate for connection.
- High reliability, strong interference resistance.

■ 型号说明 Explanation of model



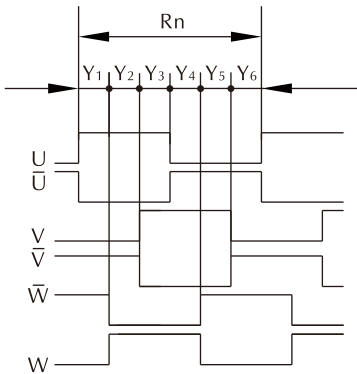
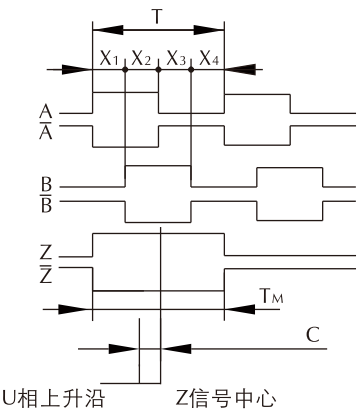
Hollow Shaft Type		Output Pulse / r	Magnetic Pole Number		Length of Cable
S: Straight Shaft	K: Tapered Shaft				
Φ6	锥度1:10	1-5000P/r	4	4极	常规：0.25M 根据客户要求
Φ8			6	6极	
根据客户需求			8	8极	

注：磁极数可根据客户需求，可做10极16极等

■ 型号举例 For example

JKD48-S8-2500-P8-G05L-0.25M diameter Φ8,2500P/R,eight pole number, side entry cable, supply voltage 5V, line driver, Cable length 0.25m.

■ 输出波形与信号位置精度



A、B、Z周期及相位
波形比：
X1+X2=0.5T±0.1T
X2+X3=0.5T±0.1T
相位差：
A、B相位差：Xn≥0.125T (n=1 2 3 4)
Z信号宽度：TM=1T±0.5T
信号位置准确度
A、B相绝对角度误差：≤0.2T(≤3000P/R)
≤0.4T(>3000P/R)
A、B相周期误差：≤0.05T(≤3000P/R)
≤0.1T(>3000P/R)
T=360/N(N为每转输出脉冲数)
Z相与U相位置关系C=±1° (机械角)
A、B相与Z相位置关系不做规定
U、V、W周期及相位
周期：R=360/N1 ±1.5° (N1为磁极数)
相位差：Yn=R/6±1.5° (n=1,2,3,4,5,6)
A、B与U、V、W相位置不做规定

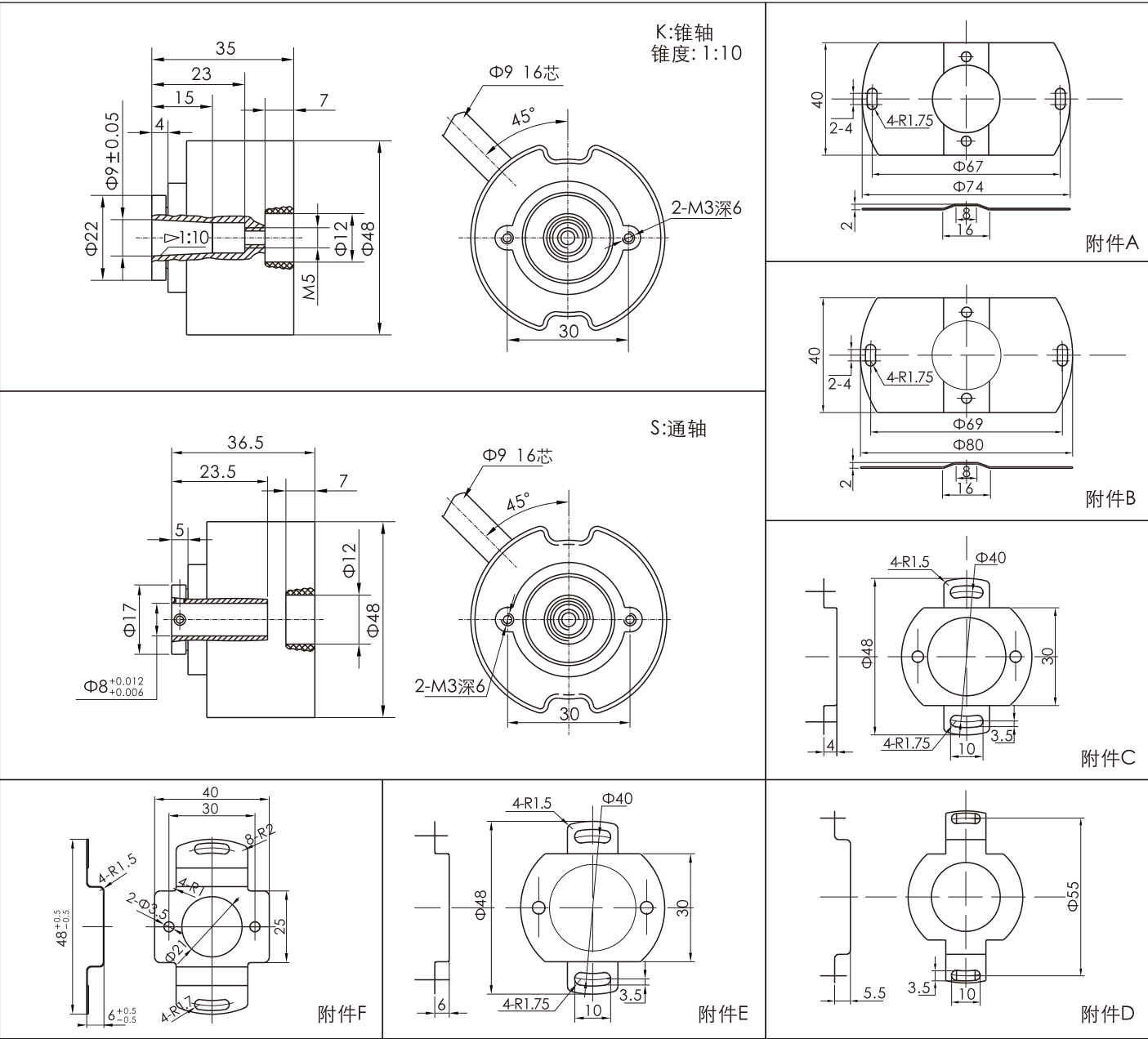
■ 接线表 Connection table

线色 Cable color	红 Red	白 White	绿 Green	黄 Yellow	棕 Brown	灰 Grey	橙 Orange	屏蔽 Shield
信号 Signal	5V	A	B	Z	U	V	W	FG
线色 Cable color	黑 Black	白/黑 White/Black	绿/黑 Green/Black	黄/黑 Yellow/Black	棕/黑 Brown/Black	灰/黑 Grey/Black	橙/黑 Orange/Black	
信号 Signal	0V	$\bar{A}$	$\bar{B}$	$\bar{Z}$	$\bar{U}$	$\bar{V}$	$\bar{W}$	

■ 技术参数 Technical data

分辨率 Resolution	100~5000P/R	转动惯量 Rotating inertia	$1 \times 10^{-5} \text{kg} \cdot \text{m}^2$
电源电压 Supply voltage	DC+5V±0.25%	最大转速 Max rotating speed	5000r/min
输出电压 V_H Output voltage	≥2.5V	抗震动 Vibration resistance	49m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V_L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次，每次6ms)
消耗电流 Current consumption	≤250mA	防护等级 Protection	IP40
输出相 Output phase	A. B. Z. U. V. W	工作温度 Operating temperature	- 30℃ ~ +80℃
响应频率 Frequency response	200kHz Max	储存温度 Storage temperature	- 35℃ ~ +95℃
上升/下降时间 Rise/fall time	≤0.1μs	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$5 \times 10^{-3} \text{N} \cdot \text{m} (+25^\circ\text{C})$	重量(不含线) Weight (no cable)	0.3kg
轴允许负荷 Shaft loading	径向(Radial) 10N 轴向(Axial) 10N	附件 Accessories	板弹簧 Elastic mounting plate

■ 机械尺寸和附件 Dimension(mm)&Accessories



JKD53 Series



- 外形Φ53，止口Φ31
- 锥形轴，锥度1：10
- 性能可靠，响应频率高，适应工作温度高，电压范围宽
- Outer diameter Φ53, flange diameter Φ31, 1: 10 taper.
- Tapered shaft, taper 1 : 10
- Reliable performance, the response frequency is high, the high temperature of the to adapt to work, voltage scope is wide

■ 型号说明 Explanation of model



■ 型号举例 For example

JKD53-8192-G05L is tapered shaft, 8192P/R, side entry cable, supply voltage 5V, voltage output .

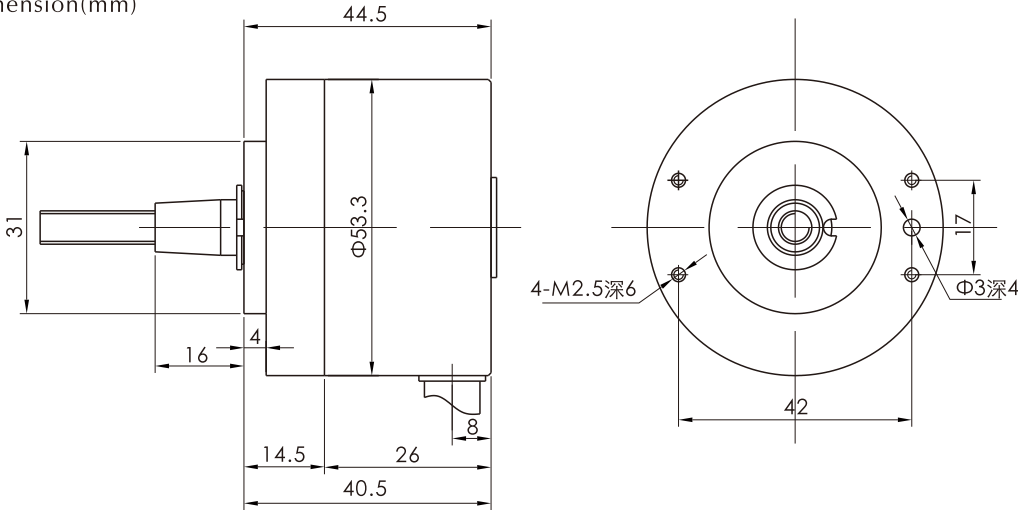
■ 技术参数 Technical data

分辨率 Resolution	10~8192P/R	转动惯量 Rotating inertia	2×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DCV±0.5V	最大转速 Max rotating speed	10000r/min
输出电压 V _H Output voltage	5V	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.3V	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次)
消耗电流 Current consumption	≤50mA	防护等级 Protection	IP54
输出相 Output phase	12路输出	工作温度 Operating temperature	- 20℃ ~ +120℃
响应频率 Frequency response	100kHz	储存温度 Storage temperature	- 30℃ ~ +100℃
上升/下降时间 Rise/fall time	≤1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	2×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.2kg
轴允许负荷 Shaft loading	径向(Radial) 80N 轴向(Axial) 20N	附件 Accessories	弹性连接器

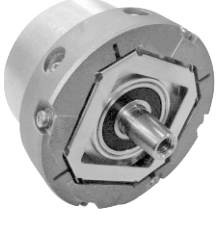
■ 接线表 Connection table

线色 Cable color	红 Red	白 White	绿 Green	黄 Yellow	棕 Brown	灰 Grey	橙 Orange	屏蔽 Shield
信号 Signal	5V	A	B	Z	U	V	W	FG
线色 Cable color	黑 Black	白/黑 White/Black	绿/黑 Green/Black	黄/黑 Yellow/Black	棕/黑 Brown/Black	灰/黑 Grey/Black	橙/黑 Orange/Black	
信号 Signal	0V	$\bar{A}$	$\bar{B}$	$\bar{Z}$	$\bar{U}$	$\bar{V}$	$\bar{W}$	

■ 机械尺寸 Dimension(mm)

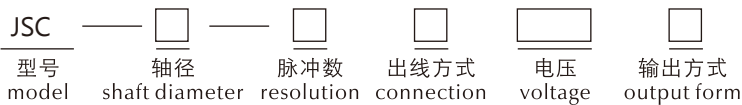


JSC Series



- 外径Φ58，锥形轴Φ9.25，锥度1:10
- 相位阵技术，适用于永磁同步电梯
- 性能可靠，响应频率高，适应工作温度高，电压范围宽
- The outer diameter of Φ58, the Φ9.25 of tapered shaft, taper 1:10
- The phase array technology, suitable for the permanent magnet synchronous Elevator
- Reliable performance, the response frequency is high, the high temperature of the to adapt to work, voltage scope is wide

■ 型号说明 Explanation of model



■ 型号举例 For example

JSC5809.25-2048-G05E is shaft diameter Φ9.25, 2048P/R, side entry cable, line driver output.

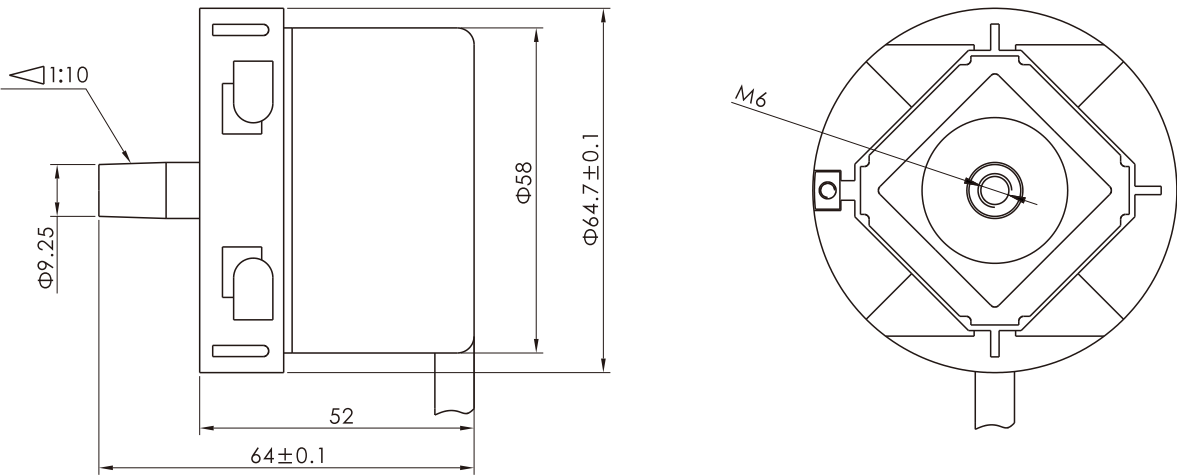
■ 技术参数 Technical data

电源电压 Supply voltage	DC5V±0.5V	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
消耗电流 Current consumption	≤150mA	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次)
输出幅值 Output amplitude	1Vpp±0.2V	防护等级 Protection	IP53
响应频率 Frequency response	100kHz	工作温度 Operating temperature	- 20℃ ~ +70℃
启动力矩 Starting torque	10×10 ⁻³ N · m(±25℃)	储存温度 Storage temperature	- 20℃ ~ +80℃
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	工作湿度 Operating humidity	0~85%RH
转动惯量 Rotating inertia	6×10 ⁻⁶ Kg · m ²	重量(不含线) Weight (no cable)	0.2kg
最大转速 Max rotating speed	5000r/min		

■ 接线表 Connection table

线色 cable color		绿 Green	白 White	橙 Orange	浅蓝 Light blue	红 Red	黑 Black	粉 Pink	蓝 Blue	棕 Brown	灰 Gray	紫 Violet	黄 Yellow	屏蔽 Shield
输出形式 Output form	L	B	A	C	D	+5V	0V	$\overline{B}$	$\overline{A}$	$\overline{Z}$	$\overline{D}$	$\overline{C}$	Z	FG
12芯带屏蔽 12-core cable	脚号	8	5	11	12	9	7	1	6	4	2	10	3	外壳

■ 机械尺寸 Dimension(mm)



JHB Series



- 外形Φ38×38，半空心轴，Φ6，Φ8，深14
- 采用板弹簧连接，内六角顶丝固定
- 微小型，多规格，可用于电脑绣花机和小型数控设备
- Shaft size Φ38×38, half-hollow shaft Φ6 or Φ8, depth 14.
- Elastic mounting plate for connection, inner hexagon screw for fastening.
- Smaller type, many specifications, used for embroider machine of computer and small numerical control equipment.

■ 型号说明 Explanation of model



■ 型号举例 For example

JHB8-1024-G05E is half-hollow shaft Φ8, 1024P/R, side entry cable, supply voltage 5V, voltage output .

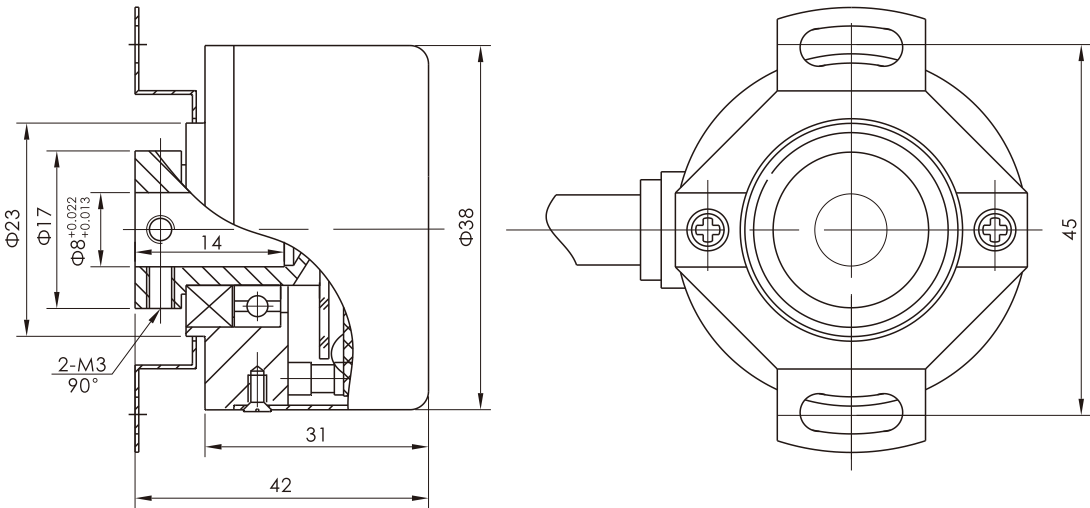
■ 技术参数 Technical data

分辨率 Resolution	100~2500P/R	转动惯量 Rotating inertia	4×10 ⁻⁷ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥V _{cc} ×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各2次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	5×10 ⁻⁴ N · m(+25℃)	重量(不含线) Weight (no cable)	0.1kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	L/D	VCC	0V	A	B	Z	Ā	Ḃ	Ḑ	FG

■ 机械尺寸 Dimension(mm)



JHF58 Series



- 外形Φ58×52，半空心轴，轴孔径Φ12、Φ15，深31
- 采用板弹簧连接，锁紧环固定
- 小型，高性能，抗干扰性强
- Shape size Φ58×52, half-hollow shaft Φ12, Φ15, depth 31.
- Elastic mounting plate for connection, locking ring for fastening.
- Small type, high performance, good interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JHF5812-1024-G05E is outer diameter Φ58, half-hollow shaft Φ12, 1024P/R, side entry cable, supply voltage 5V, voltage output .

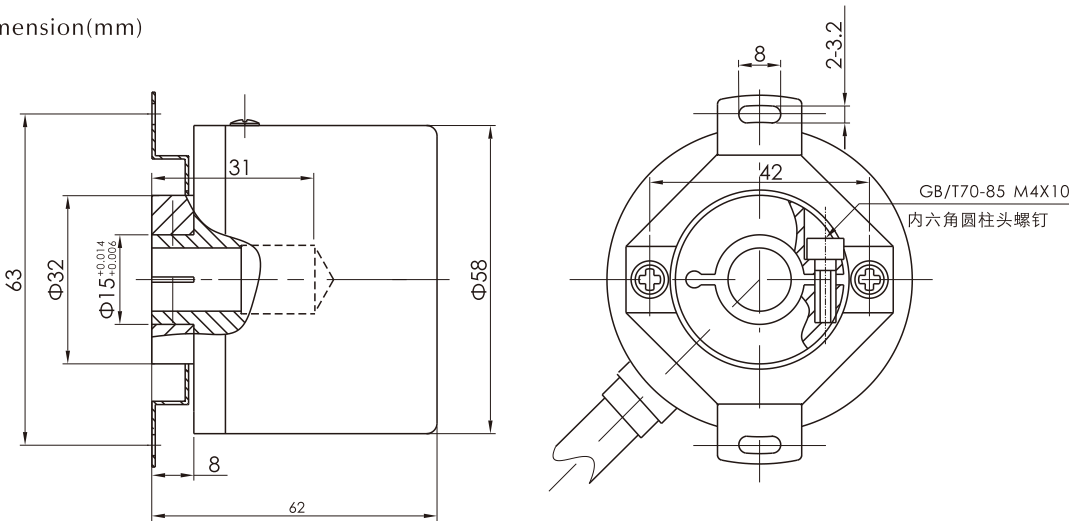
■ 技术参数 Technical data

分辨率 Resolution	500~8192P/R	转动惯量 Rotating inertia	6×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥V _{cc} ×70%	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ三个方向各3次) 持续6mS
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	4×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 50N 轴向(Axial) 50N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	P/L/D/H/M	VCC	0V	A	B	Z	Ā	Ḃ	Ḑ	FG
10芯插座脚号 Y2M-10TK plug		4	6	1	2	3	—	—	—	10
10芯插座脚号 Y2M-10TK plug		4	6	1	2	3	7	8	9	10

■ 机械尺寸 Dimension(mm)

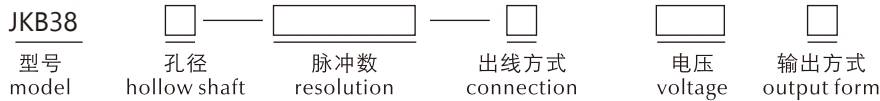


JKB38 Series



- 外径Φ38，空心轴径Φ6，Φ8
- 采用板弹簧连接，用90° 双顶丝固定
- 微小型，多规格，适用于小型自动化设备
- Outer diameter Φ38, hollow shaft Φ6 or Φ8.
- Elastic mounting plate for connection, inner hexagon screw for fastening.
- Smaller type, many specifications, used for small automotic equipment.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKB388-1024-G05E is hollow shaft Φ8, 1024P/R, side entry cable, supply voltage 5V, voltage output .

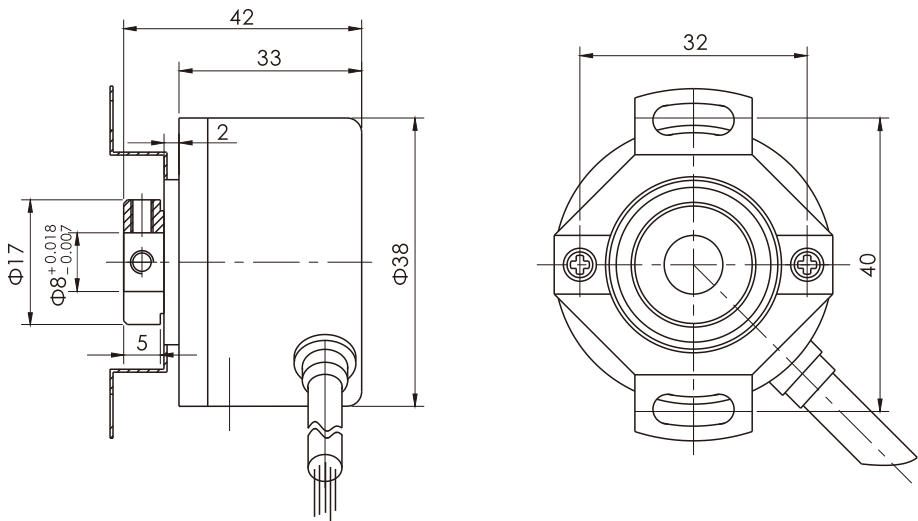
■ 技术参数 Technical data

分辨率 Resolution	10~2500P/R	转动惯量 Rotating inertia	$4\times10^{-6}\text{kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	5000r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$50\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)持续6mS
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	980m/s^2 (XYZ方向各2次)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	IP50
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	$\leq1\mu\text{S}$ 或驱动器 $\leq0.1\mu\text{S}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$2\times10^{-3}\text{N}\cdot\text{m}(+25^\circ\text{C})$	重量(不含线) Weight (no cable)	0.1kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	板弹簧 Elastic mounting plate

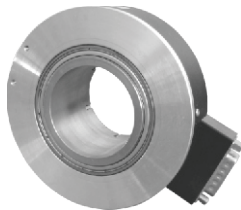
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	L/D	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG

■ 机械尺寸 Dimension(mm)

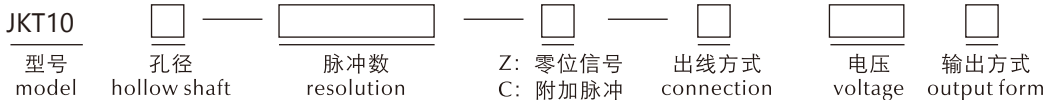


JKT100 Series



- 外径Φ100，空心轴，板弹簧连接，锁紧环固定
- 常规轴孔径Φ30、Φ35、Φ38、Φ40、Φ42、Φ45、Φ50、Φ55
- 根据客户要求，Z路或C路可选
- 主要用于电梯曳引机等设备，性能稳定，抗干扰性强
- Outer diameter Φ100, hollow shaft,elastic mounting plate for connection, locking ring for fastening.
- Basic hollow shaft Φ30, Φ35, Φ38, Φ40, Φ42, Φ45, Φ50, Φ55.
- Z signal or C signal can be choosed on request.
- Used for elevtor traction machine, steady performance, strong interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT1030-1024-J30F is outer diameter Φ100, hollow shaft Φ30, 1024P/R, side entry rectangle plug, supply voltage 30V, complementary output .

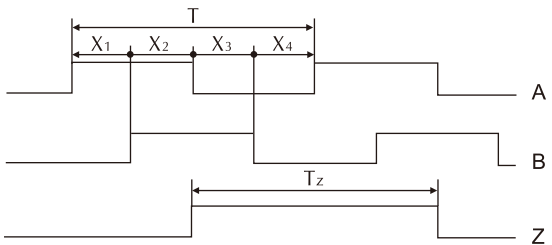
■ 技术参数 Technical data

分辨率 Resolution	360, 512, 600, 1024P/R	转动惯量 Rotating inertia	$4\times10^{-5}\text{kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 8V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$70\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	490m/s^2 (XYZ方向各3次，每次11ms)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	IP54
输出相 Output phase	A. B. Z/C	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	$\leq1\mu\text{S}$ 或驱动器 $\leq0.1\mu\text{S}$	工作湿度 Operationg humidity	30~85%RH
启动力矩 Starting torque	$5\times10^{-3}\text{N}\cdot\text{m}(+25^\circ\text{C})$	重量(不含线) Weight (no cable)	0.7kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

■ 输出波形与信号位置精度

Output waveform and signal position accuracy

从轴头方向顺时针（CW）波形图
clockwise(cw) waveform viewed
from the shaft head.



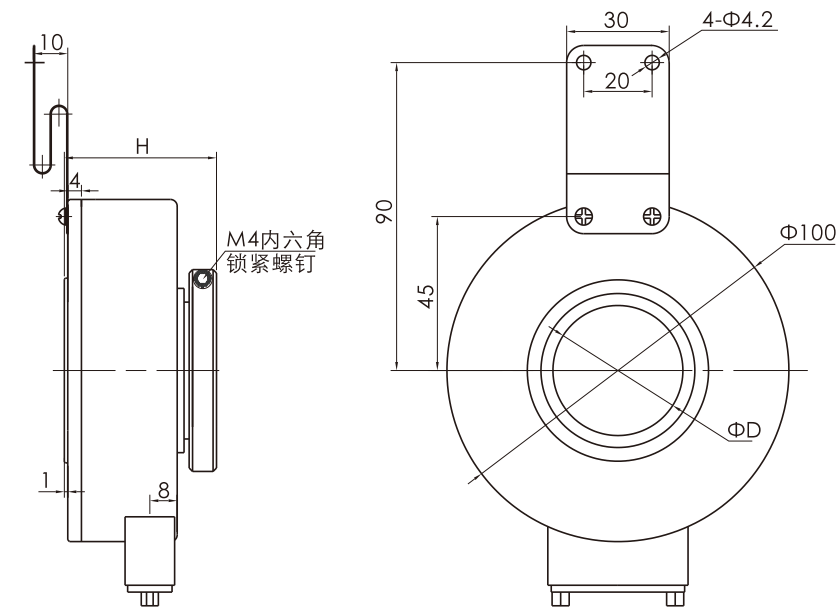
- 波形比: $X_1+X_2=0.5T\pm0.1T$
Waveforms ratio: $X_2+X_3=0.5T\pm0.1T$
- A、B相位差: $X_n\geq0.125T$ (n=1, 2, 3, 4)
A, B phase shift: $X_n\geq0.125T$ (n=1, 2, 3, 4)
- 信号位置准确度
Signal position accuracy
A、B绝对角度误差 $\leq0.2T$
A, B absolute angle error: $\leq0.2T$
- 周期误差: $\leq0.05T$
Duty error: $\leq0.05T$
- 零位信号: $T_z=1T\pm0.5T$
Zero signal width: $T_z=1T\pm0.5T$
- $T=360/N$ (N为每转输出脉冲数)
 $T=360/N$ (N is pulse number output per rotation)
- A、B相与Z相的位置关系不作规定
The position relationship between A. B and C phase is not ordered.

■ 接线表 Connection table

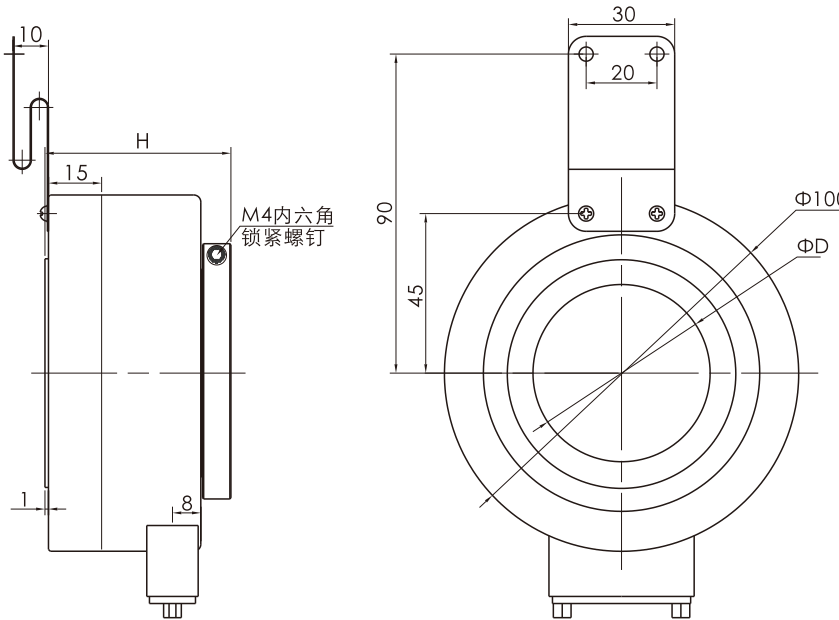
线色 cable color		红 Red	绿 Green	白 White	黑 Black	黑 Black	黑 Black	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	B	A	0V	0V	G	0V
7芯航空插座脚号 CX16K7P		1	2	3	4	5	6	7
计算机插座脚号 DB15 code		7	25	4	12	2	13	8

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	L/H	VCC	0V	A	B	Z	$\overline{A}$	$\overline{B}$	$\overline{Z}$	FG
9芯航空插座脚号 CX16K9P		1	2	3	5	7	4	6	8	9
计算机插座脚号 DB15 code		6	5	4	2	9	3	1	10	8

■ 机械尺寸 Dimension(mm)



空心轴内径 (D)	空心轴长度 (H)
Φ30F7($+0.041/+0.020$)	44.5/48
Φ35F7($+0.050/+0.025$)	42.5
Φ38F7($+0.050/+0.025$)	42.5
Φ40F7($+0.050/+0.025$)	42.5
Φ42F7($+0.025/+0.025$)	44.5
Φ45F7($+0.025/+0.025$)	44.5



空心轴内径 (D)	空心轴长度 (H)
Φ50F7($+0.05/+0.025$)	52
Φ55F7($+0.06/+0.03$)	52

JKT100B Series



- 外形Φ100×70，空心轴，带键槽4×2，板弹簧连接
- 常规轴径Φ40，密封良好，电缆侧出
- 主要用于电梯曳引机等设备，性能稳定，抗干扰性强
- Shape size Φ100×70, hollow shaft, with keyway size 4×2, elastic mounting plate for connection.
- Basic hollow shaft Φ40, well sealed, side entry cable.
- Used for elevtor traction machine, steady performance, strong interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT1040B-1024-G15C is hollow shaft Φ40, 1024P/R, side entry cable, supply voltage 15V, open collector output.

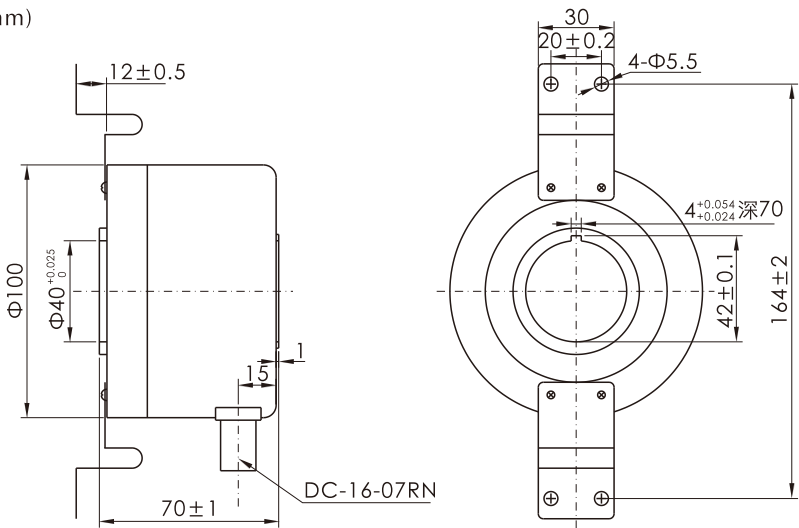
■ 技术参数 Technical data

分辨率 Resolution	512, 600, 1024P/R	转动惯量 Rotating inertia	$6 \times 10^{-4} \text{kg} \cdot \text{m}^2$
电源电压 Supply voltage	DC15V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc} \times 70\%$	抗震动 Vibration resistance	50m/s^2 (10~200Hz) (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq 0.5 \text{V}$	抗冲击 Shock resistance	980m/s^2 (XYZ方向各2次, 每次6ms)
消耗电流 Current consumption	$\leq 100 \text{mA}$	防护等级 Protection	IP54
输出相 Output phase	A.B	工作温度 Operating temperature	- 10°C ~ + 70°C
响应频率 Frequency response	0~100kHz	储存温度 Storage temperature	- 20°C ~ + 80°C
上升/下降时间 Rise/fall time	—	工作湿度 Operating humidity	30 ~ 85%RH
启动力矩 Starting torque	$1.5 \times 10^{-3} \text{N} \cdot \text{m}$ (+25°C)	重量(不含线) Weight (no cable)	约2kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	板弹簧 Elastic mounting plate

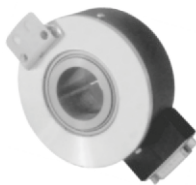
■ 接线表 Connection table

线色 Cable color		红 Red	黑 Black	黄 Yellow	棕 Brown	粉 Pink	蓝 Blue
输出形式 Output form	C/E/F	+15V	0V	A	A/0V	B	B/0V
插座脚号 Code		1	2	3	2	4	2

■ 机械尺寸 Dimension(mm)



JKT85 Series



- 外形Φ85×43，空心轴，板弹簧连接，锁紧环固定
- 可加工成孔径Φ25~Φ35，带Z路信号，高脉冲数有2000、2500、3600P/R，或按客户要求
- Shape size Φ85×43, hollow shaft, elastic mounting plate for connection, rocking ring for fastening.
- Can process hollow shaft Φ20~Φ35, with Z signal, high resolution 2000P/R, 2500P/R, 3600P/R, or on request.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT8530-1024-J05F is outer diameter Φ85, hollow shaft Φ30, 1024P/R, side entry rectangle plug, supply voltage 5V, complementary output.

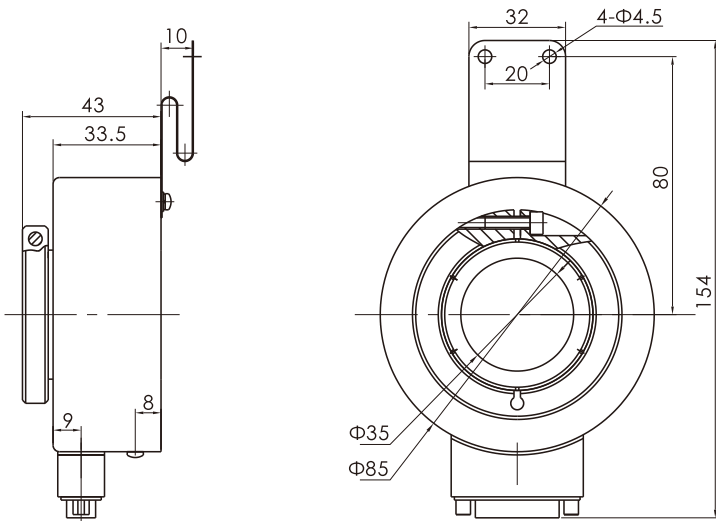
■ 技术参数 Technical data

分辨率 Resolution	2000, 2500, 3600P/R	转动惯量 Rotating inertia	$2\times10^{-5}\text{Kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$70\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	490m/s^2 (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	Ip54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	$-10^{\circ}\text{C}\sim+70^{\circ}\text{C}$
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	$-20^{\circ}\text{C}\sim+80^{\circ}\text{C}$
上升/下降时间 Rise/fall time	$\leq1\mu\text{s}$ 或驱动器 $\leq0.1\mu\text{s}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$5\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$	重量(不含线) Weight (no cable)	0.5kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	L	VCC	0V	A	B	Z	$\overline{A}$	$\overline{B}$	$\overline{Z}$	FG
计算机插座脚号 DB15 code		7	5	4	2	9	—	—	—	8
计算机插座脚号 DB15 code		7	5	4	2	9	3	1	10	8

■ 机械尺寸 Dimension(mm)



JKT78 Series



- 外形Φ78×44，空心轴，板弹簧连接，锁紧环固定
- 可加工成孔径Φ30，带Z路信号
- 基本出线方式为电缆侧出
- Shape size Φ78×44, hollow shaft, elastic mounting plate for connection, locking ring for fastening .
- Can process hollow shaft Φ30, with Z signal.
- Basic output cable mode is side entry cable.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT7830-1024-G05F is outer diameter Φ78, hollow shaft Φ30, 1024P/R, side entry rectangle plug, supply voltage 5V, complementary output.

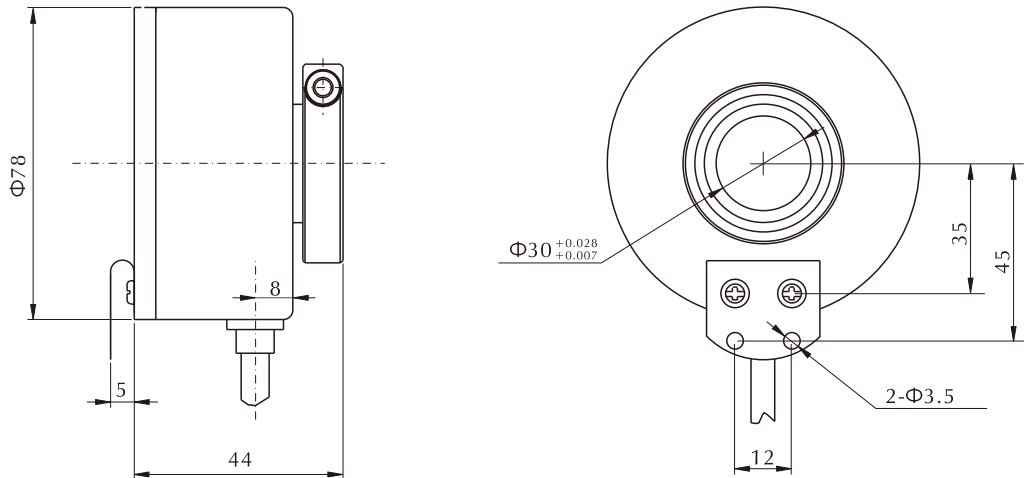
■ 技术参数 Technical data

分辨率 Resolution	1024, 2000, 2500, 3000P/R	转动惯量 Rotating inertia	$6\times10^{-5}\text{kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$70\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	490m/s^2 (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	Ip54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	$-10^{\circ}\text{C}\sim+70^{\circ}\text{C}$
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	$-20^{\circ}\text{C}\sim+80^{\circ}\text{C}$
上升/下降时间 Rise/fall time	$\leq1\mu\text{s}$ 或驱动器 $\leq0.1\mu\text{s}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$3\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$	重量(不含线) Weight (no cable)	0.5kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	CEF	Vcc	0V	A	B	Z	—	—	—	FG
	L	Vcc	0V	A	B	Z	$\overline{A}$	$\overline{B}$	$\overline{Z}$	FG

■ 机械尺寸 Dimension(mm)



JKT66 Series



- 外形Φ66×44，空心轴，板弹簧连接，锁紧环固定
- 可加工成孔径Φ10~Φ20，带Z路信号
- 基本出线方式为电缆侧出
- Shape size Φ66×44, hollow shaft,elastic mounting plate for connection, locking ring for fastening .
- Can process hollow shaft Φ10~Φ20, with Z signal.
- Basic output cable mode is side entry cable.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT6620-1024-G05F is outer diameter Φ66, hollow shaft Φ20, 1024P/R, side entry cable, supply voltage 5V, compleme ntary output .

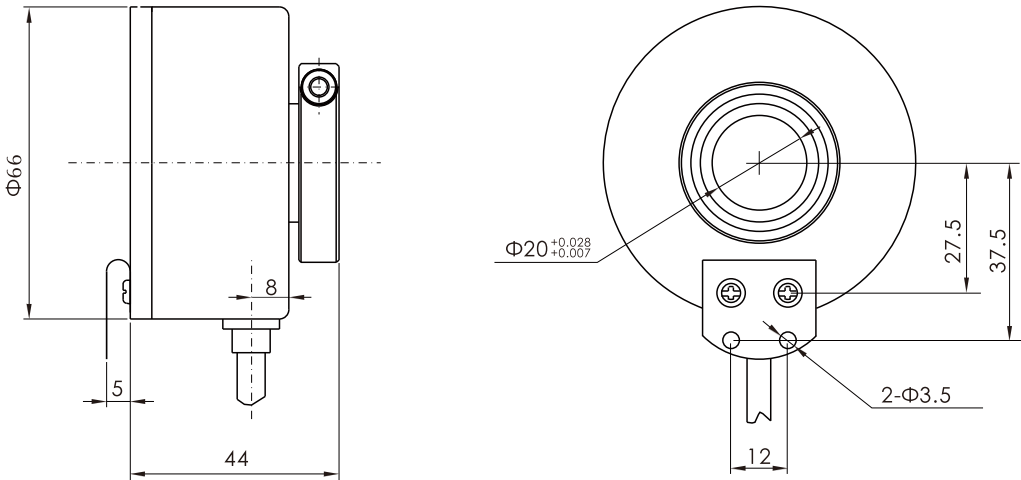
■ 技术参数 Technical data

分辨率 Resolution	1024, 2000, 2500, 3000P/R	转动惯量 Rotating inertia	6×10 ⁻⁵ kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	70m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	490m/s ² (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP52
输出相 Output phase	A. B. Z	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤1μS或驱动器≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	3×10 ⁻² N · m(+25℃)	重量(不含线) Weight (no cable)	0.5kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

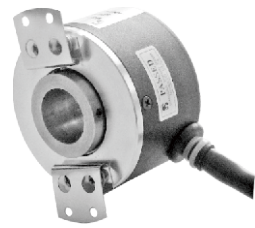
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽
输出形式 Output form	CEF	Vcc	0V	A	B	Z	—	—	—	FG
	L	Vcc	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG

■ 机械尺寸 Dimension(mm)



JKT60 Series



- 外形Φ60×45，空心轴，板弹簧连接，内六角顶丝锁紧固定
- 可加工成孔径Φ10~Φ20，带Z路信号，还可带UVW信号，脉冲数可达8192P/R
- 可靠性高，抗干扰性强
- Shape size Φ66×45, hollow shaft, elastic mounting plate for connection, inner hexagon screw for fastening .
- Can process hollow shaft Φ10~Φ20, with Z signal, U.V.W signal available, high resolution up to 8192P/R.
- High performance, strong interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT6020-8192-10P-G05L is outer diameter Φ60, hollow shaft Φ20, 8192P/R, pole number 10, side entry cable, supply voltage 5V, line driver output.

■ 技术参数 Technical data

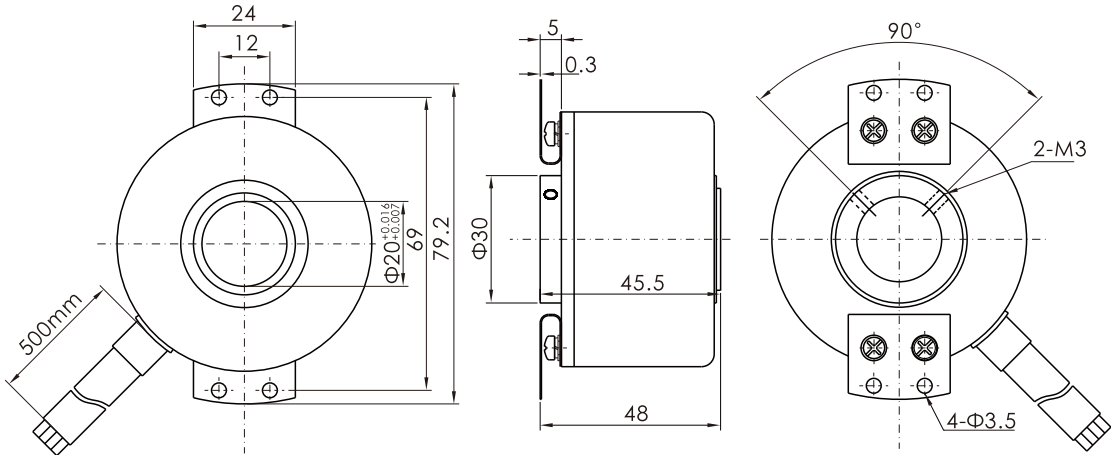
分辨率 Resolution	2048, 4096, 8192P/R	转动惯量 Rotating inertia	6.5×10 ⁻⁶ kg · m ²
电源电压 Supply voltage	DC5V±5%	最大转速 Max rotating speed	6000r/min
输出电压 V _H Output voltage	≥2.5V	抗震动 Vibration resistance	70m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	≤200mA	防护等级 Protection	IP52
输出相 Output phase	A. B. Z (U.V.W可选)	工作温度 Operating temperature	- 10℃ ~ +70℃
响应频率 Frequency response	200kHz Max	储存温度 Storage temperature	- 20℃ ~ +80℃
上升/下降时间 Rise/fall time	≤0.1μS	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	9.8×10 ⁻³ N · m(+25℃)	重量(不含线) Weight (no cable)	0.5kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 Cable color	蓝 Blue	蓝/黑 Blue/black	绿 Green	绿/黑 Green/black	黄 Yellow	黄/黑 Yellow/black	棕 Brown	棕/黑 Brown/black	灰 Grey	灰/黑 Brown/black	白 White	白/黑 White/black	红 Red	黑 Black	屏蔽 Shield
信号 Signal	A	$\bar{A}$	B	$\bar{B}$	Z	$\bar{Z}$	U	$\bar{U}$	V	$\bar{V}$	W	$\bar{W}$	Vcc	0V	FG
信号 Signal	A	$\bar{A}$	B	$\bar{B}$	Z	$\bar{Z}$							Vcc	0V	FG

注：UVW信号可选。 Note: UVW signal can be choosed.

■ 机械尺寸 Dimension(mm)



JKT50A Series



- 外形Φ50×28，半空心轴，深15，板弹簧连接，内六角顶丝固定
- 孔径Φ6，Φ8，还可加工成空心轴Φ6，Φ8
- 用于电梯门机控制系统或小型自动化设备
- Shape size Φ50×28, half-hollow shaft , depth 15, elastic mounting plate for connection, inner hexagon screw for fastening.
- Half-hollow Shaft Φ6 Φ8, hollow shaft Φ6 Φ8 available.
- Used for elevtor door control system or small automatic equipment.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT5008A-512-G05E is outer diameter Φ50, half-hollow shaft Φ8, 512P/R, side entry cable, supply voltage 5V, voltage output.

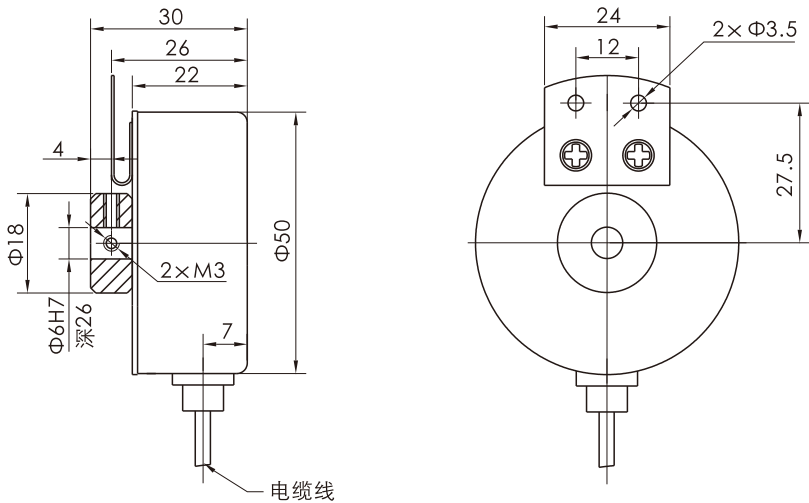
■ 技术参数 Technical data

分辨率 Resolution	128, 512, 1024P/R	转动惯量 Rotating inertia	$2\times10^{-7}\text{Kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	1000r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$50\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	500m/s^2 (XYZ方向各3次，每次11ms)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	IP52
输出相 Output phase	A. B	工作温度 Operating temperature	$-10^{\circ}\text{C}\sim+70^{\circ}\text{C}$
响应频率 Frequency response	20kHz Max	储存温度 Storage temperature	$-20^{\circ}\text{C}\sim+80^{\circ}\text{C}$
上升/下降时间 Rise/fall time	$\leq1\mu\text{S}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$1\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$	重量(不含线) Weight (no cable)	0.2kg
轴允许负荷 Shaft loading	径向(Radial) 30N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

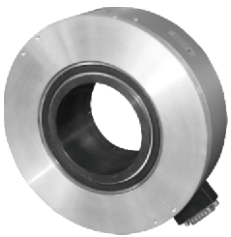
■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	黑 Black	绿 Green	黑 Black
输出形式 Output form	C/E/F	VCC	0V	A	0V	B	0V
脚 号 Plug code		5	2	1	4	3	6

■ 机械尺寸 Dimension(mm)



JKT180 Series



- 外径Φ180，空心轴，板弹簧连接，锁紧环固定
- 常规轴孔径Φ75、Φ95
- 根据客户要求，Z路或C路可选
- 主要用于电梯曳引机等设备，性能稳定，抗干扰性强
- Outer diameter Φ180, hollow shaft, elastic mounting plate for connection, locking ring for fastening.
- Basic hollow shaft Φ75, Φ95.
- Z signal or C signal can be choosed on request.
- Used for elevtor traction machine, steady performance, strong interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKT1875-1024-J30F is outer diameter Φ180, hollow shaft Φ75, 1024P/R, side entry rectangle plug, supply voltage 30V, complementary output .

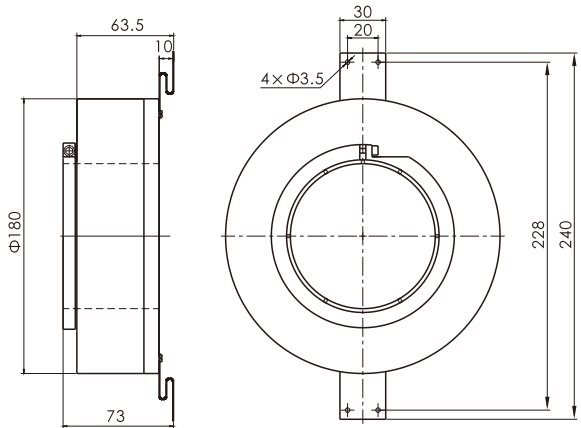
■ 技术参数 Technical data

分辨率 Resolution	1024P/R	转动惯量 Rotating inertia	$4\times10^{-5}\text{kg}\cdot\text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc}\times70\%$	抗震动 Vibration resistance	$70\text{m/s}^2(10\sim200\text{Hz})$ (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq0.5\text{V}$	抗冲击 Shock resistance	490m/s^2 (XYZ方向各3次，每次11ms)
消耗电流 Current consumption	$\leq150\text{mA}$	防护等级 Protection	IP54
输出相 Output phase	A. B. Z/C	工作温度 Operating temperature	$-10^{\circ}\text{C}\sim+70^{\circ}\text{C}$
响应频率 Frequency response	100kHz Max	储存温度 Storage temperature	$-20^{\circ}\text{C}\sim+80^{\circ}\text{C}$
上升/下降时间 Rise/fall time	$\leq1\mu\text{S}$ 或驱动器 $\leq0.1\mu\text{S}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$5\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$	重量(不含线) Weight (no cable)	0.7kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	板弹簧 Elastic mounting plate

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	L	VCC	0V	A	B	Z	A	B	Z	FG
计算机插座脚号 DB15 code		7	5	4	2	9	—	—	—	8
计算机插座脚号 DB15 code		7	5	4	2	9	3	1	10	8

■ 机械尺寸 Dimension(mm)

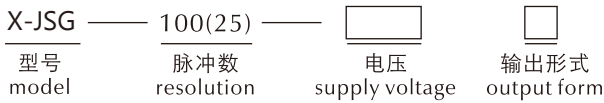


X-JSG Series



- 外形205×92×60，配用多芯弹簧电缆，自然长度2米
- 具备×1、×10、×100三档倍率，可实现6轴切换，备有急停、复位开关
- 用于数控机床零点补正及信号分割，手持型，使用方便
- Shape size205×92×60, with multi-core spring cable,natural length 2 metres.
- Three rate grades: ×1 ×10 ×100, four shafts X.Y.Z.4.5.6 can be transformed, with emergency switch and reset switch.
- Used for zero signal position emendation and signal devision of CNC machine tools, handy and convenient.

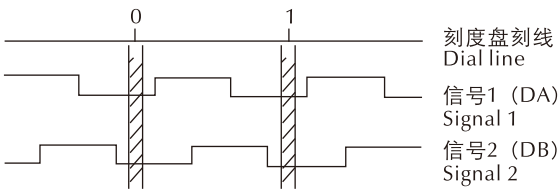
■ 型号说明 Explanation of model



■ 型号举例 For example

X-JSG-100-05E is 100P/R, supply voltage 5V, voltage output .

■ 输出波形与信号位置精度 Output wave form and position accuracy



刻度盘刻线停顿位置在斜线的范围内，与其配合的设备必须确认其停顿位置。
The stopping position of dial plate is within the range of bias. The instruments which is matched with must confirm the stopping position.

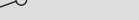
■ 技术参数 Technical data

电源电压 Supply voltage	DC5V±0.25V	5 ~ 15V	8 ~ 30V	DC5V±0.25V
输出形式 output form	E/C	E/C	E/C	L
输出电压 output voltage	V _H : ≥V _{CC} ×85% V _L : ≤0.5V			V _H : ≥2.5V V _L : ≤0.5V
消耗电流 current consumption	≤30mA	≤60mA	≤100mA	≤100mA
响应频率 frequency response	0~5KHz			
上升/下降时间 rise/fall time	≤1μS			≤0.1μS
正常机械转速 operating speed	≤200r/min			
最大机械转速 Max rotating speed	≤600r/min			
工作温度 operating temperature	-10~+70℃			0~+70℃
储存温度 storage temperature	-20~+80℃			-10~+80℃
工作寿命 working life	MTBF≥10000h(25℃ 200rpm)			
重量（不含线） weight (no cable)	0.3kg (without cable)			
附件 accessories	磁性贴或挂板 Magnetic sticker or peg board			

■ 输出电路 Output circuit

输出方式 Output form	电压 (E) Voltage	集电极开路 (C) Open collector	驱动器 (L) Line driver
电 路 Circuit			

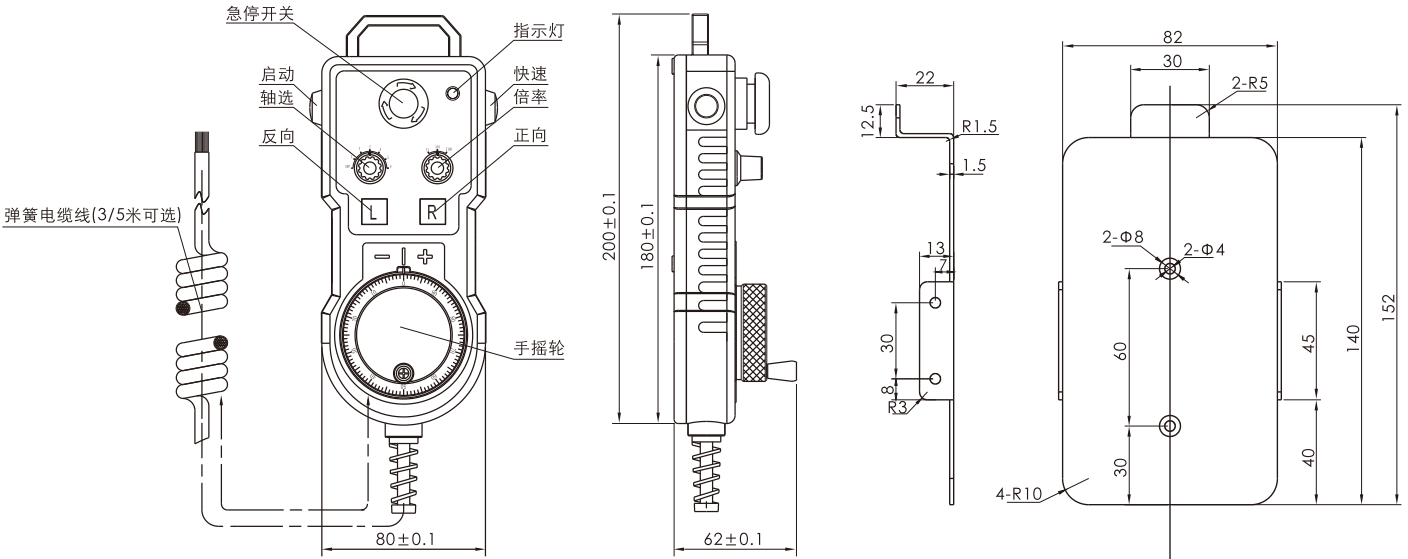
■ 接线表 Connection table

形式 Form	编码器部分 Encoder part						急停 Emergency switch		LED 工作指示 	公共 Common	启动 Start		倍率 Rate transformation switch 			轴转换 Axial transformation 							壳 Shell 	
										左 Left	右 Right													
																								
线色	红	黑	白	蓝	绿	粉	黑 红	黑 黄	白 绿	白 红	白 棕	/	/	白 蓝	黑 绿	白 紫	灰	紫	蓝 黄	棕	红 黄	黑 棕	橙	屏蔽
Line color	Red	Black	White	Blue	Green	Pink	Black Red	Black Yellow	White Green	White Red	White Brown	/	/	White Blue	Black Green	White Violet	Grey	Violet	Blue Yellow	Brown	Red Yellow	Black Brown	Orange	Shield
E	Vcc	0V	A	—	B	—	Nc2	Nc2	LED0V	+24V	Com	/	/	×1	×10	×100	OFF	X	Y	Z	4	5	6	FG
L	Vcc	0V	A	Ā	B	Ī	Nc2	Nc2	LED0V	+24V	Com	/	/	×1	×10	×100	OFF	X	Y	Z	4	5	6	FG

■ 开关电气参数 Electric data of switch

急停开关 Emergency switch			复位开关 Reset switch			轴选倍率开关 Rate transformation switch		
触点 Touch dot	交流时最大负荷 Max load alternating current	AC25V/0.5A	触点 Touch dot	直流时最大负荷 Max load direct current	DC12V/0.5A	直流时最大负荷 Max load direct current	DC12V/0.15A	
	直流时最大负荷 Max load direct current	DC24V/1A						

■ 机械尺寸 Dimension(mm)



JMG1 Series



- 金属刻度盘外径Φ80，薄型，美观
- 安装部位尺寸Φ72×31，3个M4螺钉固定
- 用于数控机床零点补正及信号分割，端子后出
- Metal dial plate, outer diameter Φ80, thin design and good look.
- Installation size Φ72×31, three M4 screws for fastening.
- Used for zero signal position emendation and signal's devision of CNC machine tools, terminals out from back.

■ 型号说明 Explanation of model

JMG1	100(25)	L	(E)
型号 model	脉冲数 resolution	驱动器输出（电压输出） line driver (voltage output)	

■ 型号举例 For example

JMG1-100-05L is 100P/R, supply voltage 5V, line driver output .

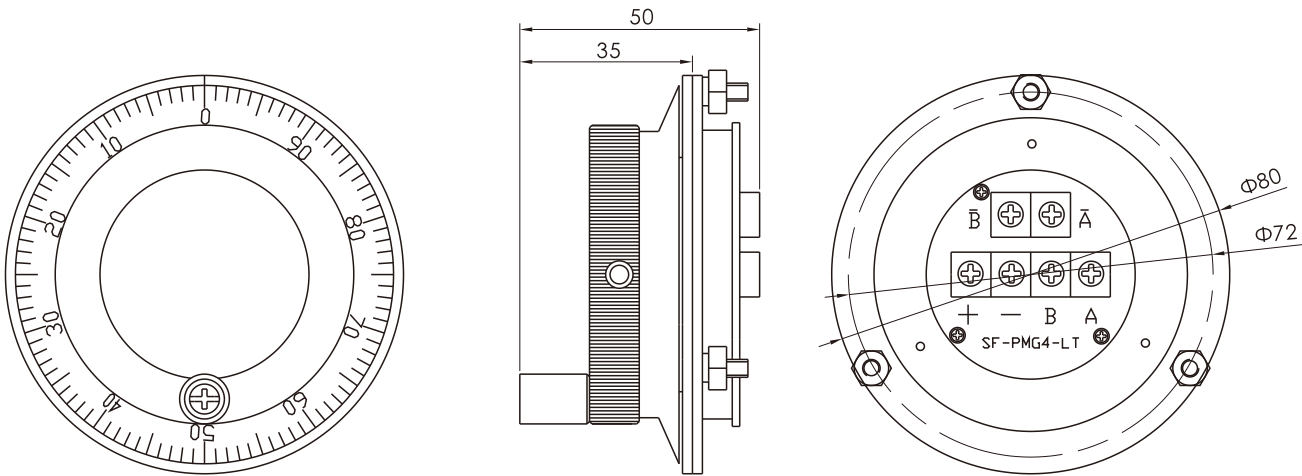
■ 技术参数 Technical data

电源电压 Supply voltage	5~15V	8~30V	5V±0.25V	正常转速 Operating speed	≤200r/min
输出形式 Output form	E/C	E/C	L	最大机械转数 Max operating speed	600r/min
输出电压 Output voltage	$V_H \geq V_{CC} \times 70\%$ $V_L \leq 0.5V$		$V_H \geq 2.5V$ $V_L \leq 0.5V$	启动力矩 Starting torque	$1 \times 10^{-2} N \cdot m (+25^{\circ}C)$
消耗电流 Current consumption	≤60mA	≤100mA	≤100mA	工作温度 Operating temperature	- 10°C ~ +70°C
响应频率 Frequency response	0~5KHz			储存温度 Storage temperature	- 20°C ~ +80°C
上升/下降时间 Rise/fall time	≤1μs		≤0.1μs	机械寿命 Life	3×10 ⁵ 转(200r/min以下)
输出波形 Output wave	方波 Square wave			防护 Protection	IP54
占空比 Duty cycle	0.5T±0.1T			重量 Weight	约0.3kg

■ 接线表 Connection table

输出形式 Output form	端子代号 Terminal Code	1	2	3	4	5	6
电压(E) Voltage	信号 Signal	Vcc	0V	A	—	B	—
驱动器(L) Driver	信号 Signal	Vcc	0V	A	$\bar{A}$	B	$\bar{B}$

■ 机械尺寸 Dimension(mm)



JMG4 Series



- 塑料刻度盘外径Φ61.5，体轻
- 安装尺寸Φ50.8×11.2，3个M3螺钉固定
- 用于数控机床零点补正及信号分割,端子后出
- Plastic dial plate, outer diameter Φ61.5, light weight,super thin design.
- Installation dimensions Φ50.8×11.2,three M3 screws for fastening.
- Used for zero signal position emendation and signals devision of CNC machine tools.

■ 型号说明 Explanation of model

JMG4	100(25)	L	(E)
型号 model	脉冲数 resolution	驱动器输出（电压输出） line drive (voltage output)	

■ 型号举例 For example

JMG4-100-05L is 100P/R, supply voltage 5V, line driver output .

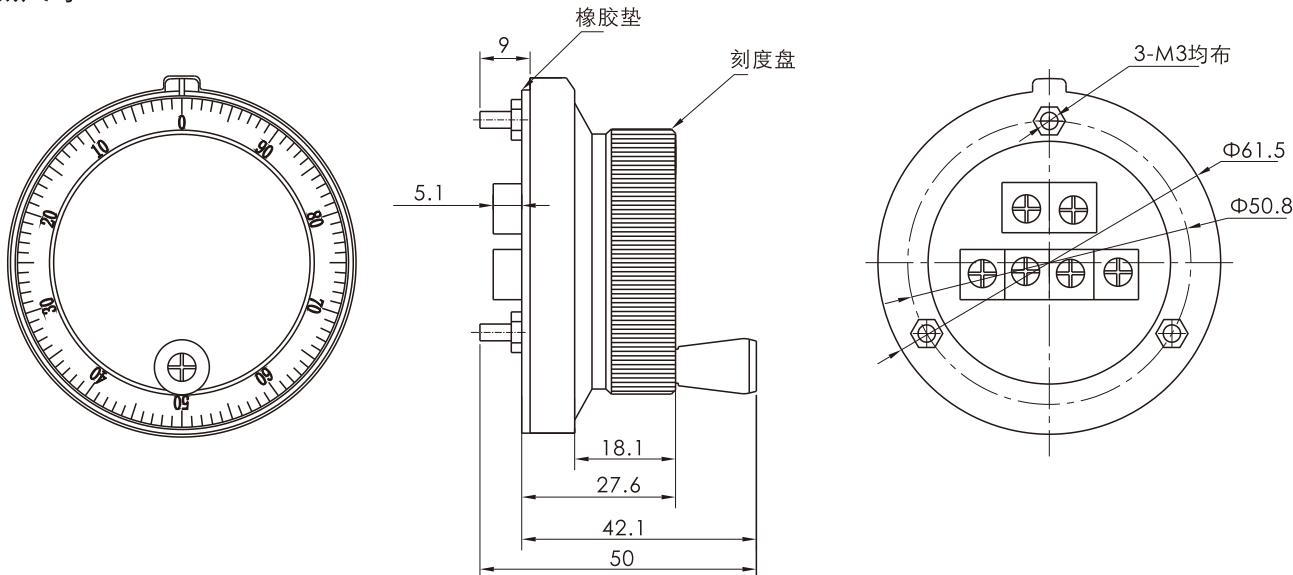
■ 技术参数 Technical data

电源电压 Supply voltage	5~15V	8~30V	5V±0.25V	正常转速 Operating speed	≤200r/min
输出形式 Output form	E/C	E/C	L	最大机械转数 Max operating speed	600r/min
输出电压 Output voltage	$V_H \geq V_{CC} \times 70\%$ $V_L \leq 0.5V$		$V_H \geq 2.5V$ $V_L \leq 0.5V$	启动力矩 Starting torque	$1 \times 10^{-2} N \cdot m (+25^{\circ}C)$
消耗电流 Current consumption	≤60mA	≤90mA	≤160mA	工作温度 Operating temperature	- 10°C ~ +70°C
响应频率 Frequency response	0~5KHz			储存温度 Storage temperature	- 20°C ~ +80°C
上升/下降时间 Rise/fall time	≤1μs		≤0.1μs	机械寿命 Life	3×10 ⁵ 转(200r/min以下)
输出波形 Output wave	方波 Square wave			防护 Protection	IP54
占空比 Duty cycle	0.5T±0.1T			重量 Weight	约0.2kg

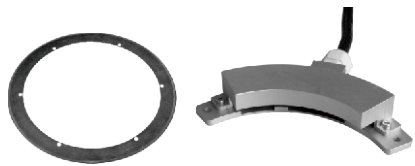
■ 接线表 Connection table

输出形式 Output form	端子代号 Terminals code	1	2	3	4	5	6
电压(E) Voltage	信号 Signal	0V	Vcc	A	—	B	—
驱动器(L) Driver	信号 Signal	0V	Vcc	A	$\bar{A}$	B	$\bar{B}$

■ 机械尺寸 Dimension(mm)



JCH Series



- 外径Φ264，内径Φ180，分体式
- 大型，高性能，抗干扰性强
- Outer diameter Φ264, shaft diameter Φ180, split style.
- Big type, high performance, good interference resistance.

■ 型号说明 Explanation of model



■ 型号举例 For example

JCH-1024Z-G05E-F is outer diameter Φ264 1024P/R, side entry cable, supply voltage 5V, line driver output.

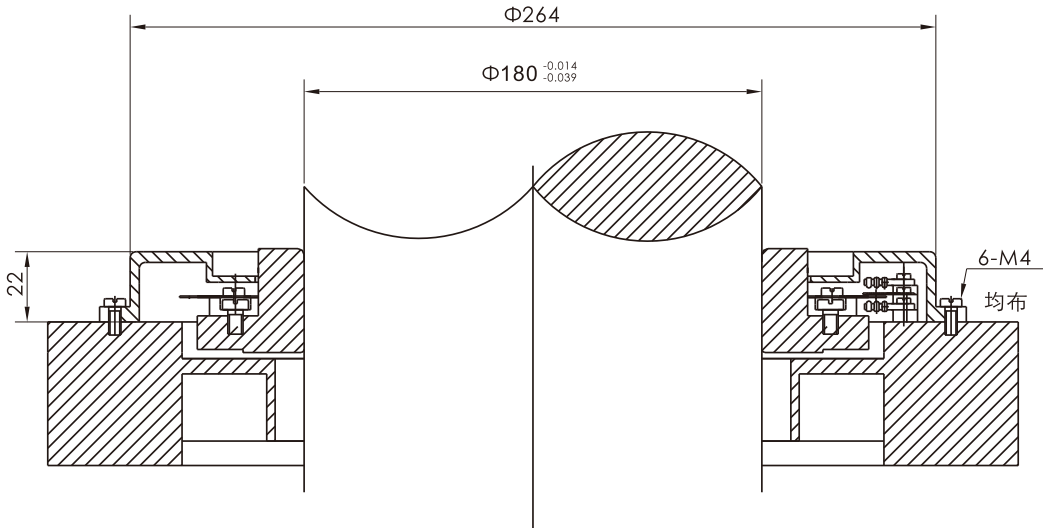
■ 技术参数 Technical data

分辨率 Resolution	500~5000P/R	转动惯量 Rotating inertia	$4 \times 10^{-6} \text{kg} \cdot \text{m}^2$
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	2500r/min
输出电压 V_H Output voltage	$\geq V_{cc} \times 70\%$	抗震动 Vibration resistance	50m/s^2 (10~200Hz) (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq 0.5 \text{V}$	抗冲击 Shock resistance	980m/s^2 (XYZ三个方向各3次) 时间6mS
消耗电流 Current consumption	$\leq 150 \text{mA}$	防护等级 Protection	IP54
输出相 Output phase	A. B. Z	工作温度 Operating temperature	$-10^\circ\text{C} \sim +70^\circ\text{C}$
响应频率 Frequency response	60kHz Max	储存温度 Storage temperature	$-20^\circ\text{C} \sim +80^\circ\text{C}$
上升/下降时间 Rise/fall time	$\leq 1\mu\text{S}$ 或驱动器 $\leq 0.1\mu\text{S}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$3 \times 10^{-3} \text{N} \cdot \text{m}$ (+25℃)	重量(不含线) Weight (no cable)	0.35kg
轴允许负荷 Shaft loading	径向(Radial) 40N 轴向(Axial) 20N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 cable color		红 Red	黑 Black	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	C/E/F	VCC	0V	A	B	Z	—	—	—	FG
	T	VCC	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG

■ 机械尺寸 Dimension(mm)



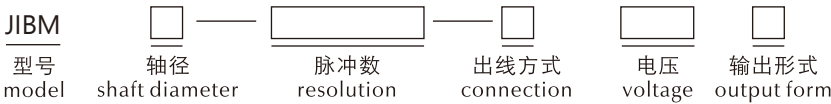
磁电式编码器部分 Magnetic rotary encoder part

JIBM Series



- 外径Φ38，止口Φ20，轴头D形切口
- 轴径Φ6×15，可选用SE或PE联轴器
- 小型、抗干扰性强，耐冲击振动，可靠性高
- Outer diameter 38, flange diameter Φ20, flute type incision
- Shaft size 6x15, SE or PE coupling can be choosed
- Small type, good interference resistance, resistant to shock, high reliability

■ 型号说明 Explanation of model



■ 型号举例 For example

JIBM6-12-GB-12BR is shaft Φ6、12, side entry cable, supply voltage 8-12V, binary serial output .

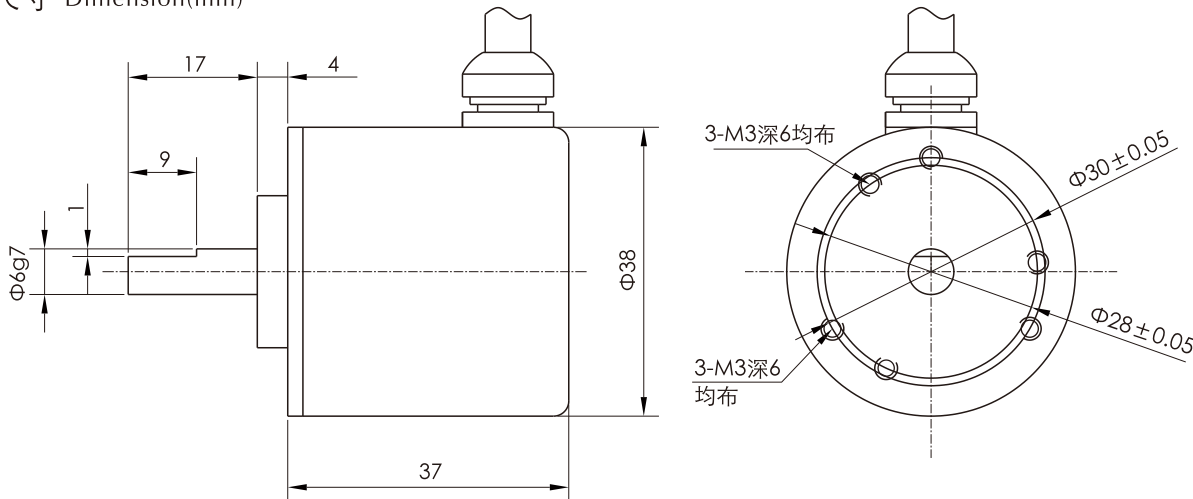
■ 技术参数 Technical data

分辨率 Resolution	2^n (n≤14绝对式, n≤12增量式)	转动惯量 Rotating inertia	$4 \times 10^{-7} \text{kg} \cdot \text{m}^2$
电源电压 Supply voltage	DC 8-12V±0.25V	最大转速 Max rotating speed	6000r/min
输出电压 V_H Output voltage	5V	抗震动 Vibration resistance	50m/s^2 (10~200Hz) (XYZ方向各2小时)
输出电压 V_L Output voltage	$\leq 0.3 \text{V}$	抗冲击 Shock resistance	980m/s^2 (XYZ方向各3次)
消耗电流 Current consumption	$\leq 50 \text{mA}$	防护等级 Protection	IP54
输出相 Output phase	A. B	工作温度 Operating temperature	$-10^\circ\text{C} \sim +75^\circ\text{C}$
响应频率 Frequency response	115200	储存温度 Storage temperature	$-20^\circ\text{C} \sim +80^\circ\text{C}$
上升/下降时间 Rise/fall time	$\leq 1\mu\text{s}$	工作湿度 Operating humidity	30~85%RH
启动力矩 Starting torque	$2 \times 10^{-3} \text{N} \cdot \text{m}$ (+25℃)	重量(不含线) Weight (no cable)	0.18kg
轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 Cable color		红 Red	黑 Black	白 Whith	绿 Green
输出形式 Output form	RS485	Vcc	0V	A	B

■ 机械尺寸 Dimension(mm)

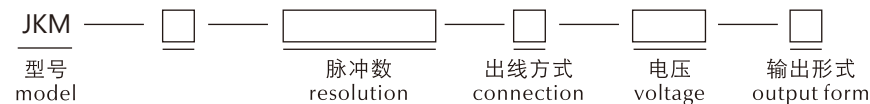


JKM Series



- 外径Φ163, 内径Φ115
 - 磁环编码器, 孔径可任选
 - 性能可靠, 安装方便, 抗污染能力强
-
- Outer diameter Φ163, hollow shaft Φ115.
 - Magnetic encoder aperture optionally.
 - Reliable performance, easy installation, strong anti-pollution.

■ 型号说明 Explanation of model



■ 型号举例 For example

JKM115-1024-G05L is hollow shaft $\Phi 115$, 1024P/R, side entry cable, supply voltage 5V, line driver output.

■ 技术参数 Technical data

分辨率 Resolution	128P/R-8960P/R	最大转速 Max rotating speed	10000r/min
电源电压 Supply voltage	DCV±0.5V	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _H Output voltage	5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次)
输出电压 V _L Output voltage	≤0.5V	防护等级 Protection	IP54
消耗电流 Current consumption	≤150mA	工作温度 Operating temperature	-20℃ ~ +80℃
输出相 Output phase	A. B. Z. $\bar{A}$. $\bar{B}$. $\bar{Z}$	储存温度 Storage temperature	-20℃ ~ +90℃
响应频率 Frequency response	100kHz	工作湿度 Operating humidity	30 ~ 85%RH
上升/下降时间 Rise/fall time	≤1μs	重量(不含线) Weight (no cable)	0.2kg

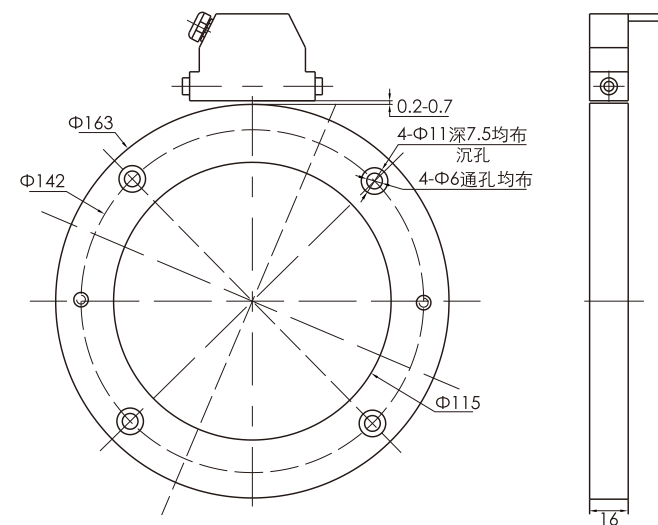
■ 接线表 Connection table

线色 Cable color		红 Red	黑 Black	白 Whith	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	棕 Brown	屏蔽 Shield
输出形式 Output form	L	Vcc	0V	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$	FG

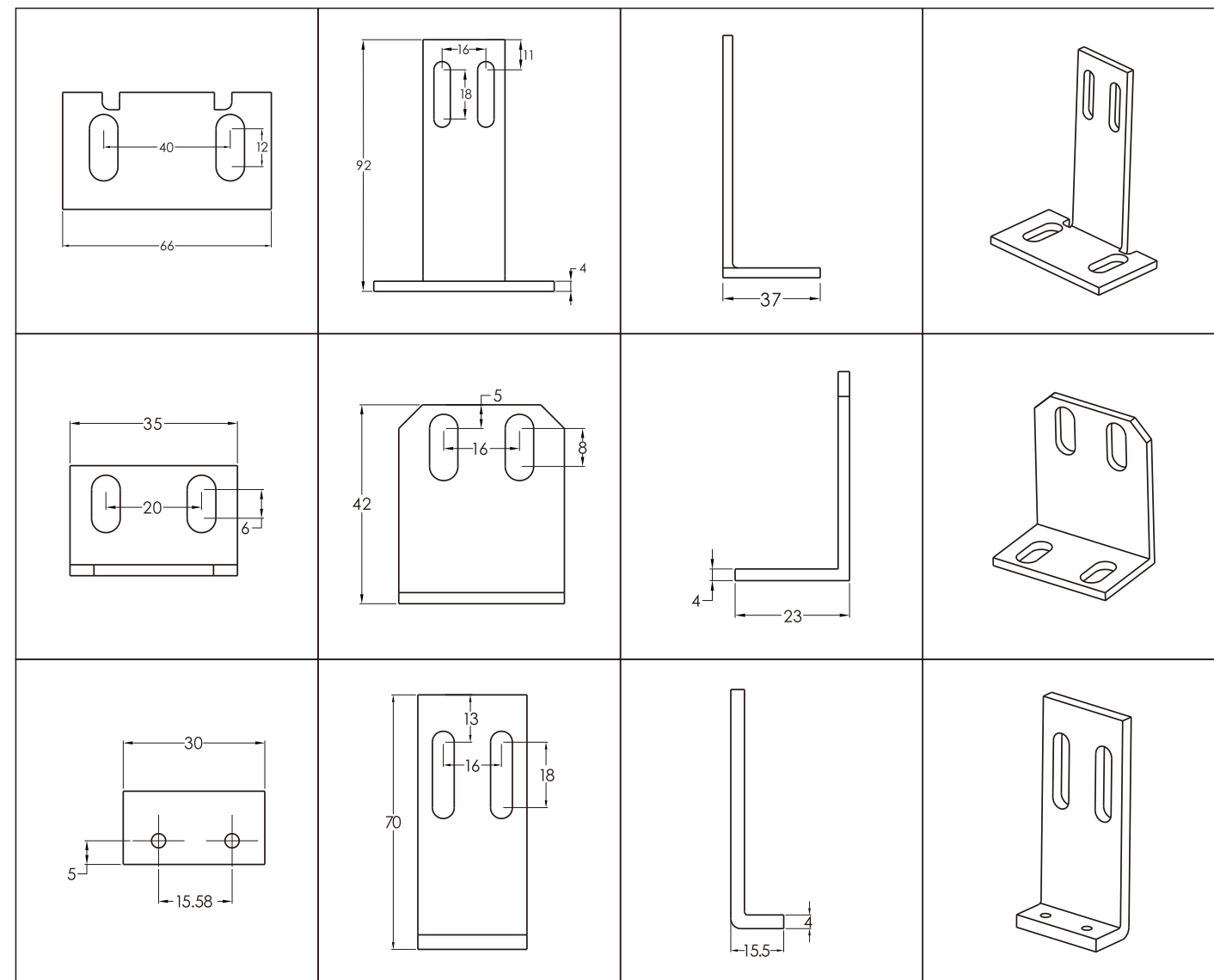
■ 机械尺寸 Dimension(mm)

磁原体名称	PKM115	PKM163	PKM203	如需特殊尺寸可联系我们
磁原体外径	Φ115	Φ163	Φ203	固定尺寸，不可更改
磁原体内径	≤Φ85	≤Φ130	≤Φ170	可更据客户要求制作
止口外径	可更据客户要求制作或可不用此止口安装			
键槽尺寸	可更据客户要求制作			
整体高度	标准为16mm，最低不能低于11mm，或可更据客户要求制作			
拆卸孔位	标准为M5和M6，或可更据客户要求制作			
安装尺寸	可更据客户要求制作			

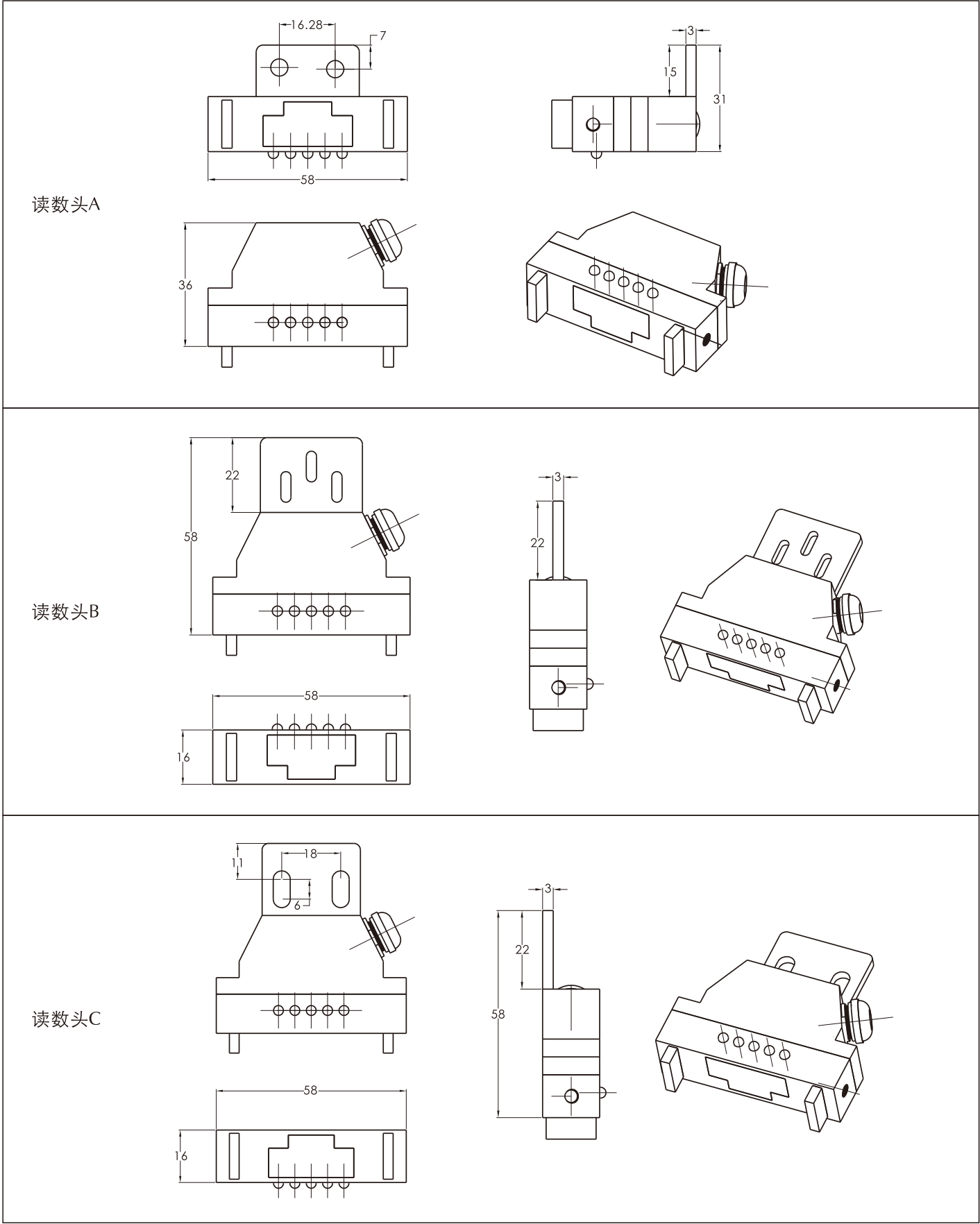
- 主体 The main components



■ 连接板 The connecting plate



■ 读数头 Reading head



JAL1 Series



- 外径Φ110，止口Φ104，槽形切口，位数可达11位
- 轴径Φ8×25.5，可选用SE或PE联轴节
- 承载能力大，自然二进制或格雷码，插座后出
- Outer diameter Φ110, flange diameter Φ104, flute type incision, resolution up to 11 bit.
- Shaft size Φ8×25.5, SE or PE coupling can be choosed.
- Strong capability of loading, Pure binary/Gray output, rear entry plug.

■ 型号说明 Explanation of model



■ 型号举例 For example

JAL1-2¹⁰-E05E is 10 bit, 1024P/R , rear entry plug, supply voltage 5V, voltage output.

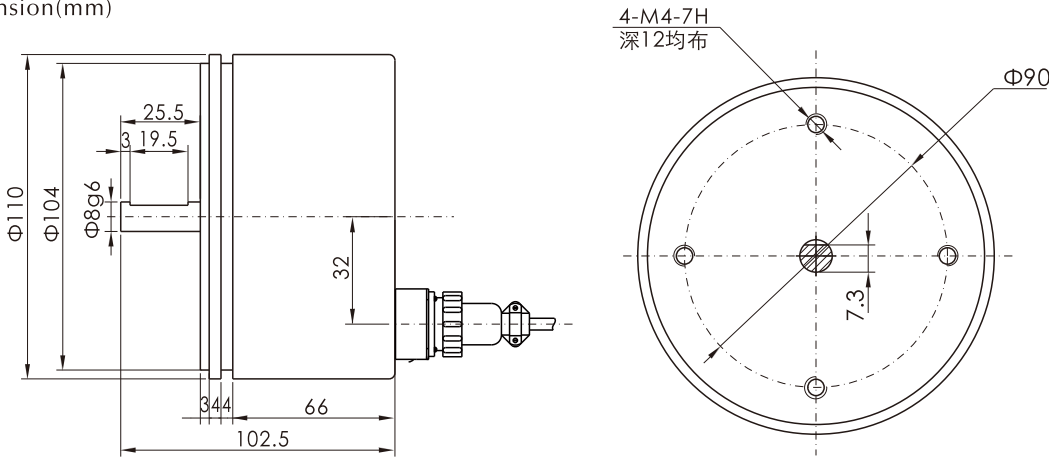
■ 技术参数 Technical data

分割数 Resolution	2 ⁸ , 2 ⁹ , 2 ¹⁰ , 2 ¹¹	启动力矩 Starting torque	1.5×10 ⁻³ N·m(+25℃)
输出逻辑 Output logic	正逻辑 Positive logic	轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
输出码制 Output code	Pure binary/Gray output.	转动惯量 Rotating inertia	2×10 ⁻⁷ Kg·m ²
电源电压 Supply voltage	DC+5V±0.5V DC+12V±1.2V DC+15V±1.5V DC+24V±2.4V	最大转速 Max rotating speed	600r/min
输出电压 V _H Output voltage	≥V _{CC} ×70%	抗震动 Vibration resistance	30m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	300m/s ² (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	≤150mA	防护等级 Protection	IP54
响应频率 Frequency response	20kHz Max	工作温度 Operating temperature	- 10℃ ~ +70℃
上升/下降时间 Rise/fall time	≤1μS	储存温度 Storage temperature	- 20℃ ~ +80℃
注入电流 Injection current	≤40mA	工作湿度 Operating humidity	30~85%RH
测量范围 Measure range	0~360°	重量(不含线) Weight (no cable)	0.9kg
测角误差 Measure error	±20′, ±15′, ±10′, ±5′	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

脚号 Plug code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
形式 Form	256 (8bit)	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇	R ₈	—	—	—	—	—	0V	0V	Vcc	Vcc	—
	512 (9bit)	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇	R ₈	R ₉	—	—	—	—	0V	0V	Vcc	Vcc	—
	1024 (10bit)	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇	R ₈	R ₉	R ₁₀	—	—	—	0V	0V	Vcc	Vcc	—
	2048 (11bit)	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇	R ₈	R ₉	R ₁₀	R ₁₁	—	—	—	0V	0V	Vcc	Vcc

■ 机械尺寸 Dimension(mm)



JAL2 Series



- 外径Φ50，止口Φ30，轴头D形切口，位数可达9位
- 轴径Φ8×15，可加工成Φ6，可选用SE或PE型联轴节
- 自然二进制或格雷码输出, 电缆侧出
- Outer diameter Φ50, flange diameter Φ30, shaft head D-type incision, resolution up to 9 bit.
- Shaft size Φ8×15, shaft Φ6 available, SE or PE coupling can be choosed.
- Pure binary/Gray output, Side entry cable.

■ 型号说明 Explanation of model



■ 型号举例 For example

JAL2-2¹⁰-G05E is 10 bit, 1024P/R, side entry cable, supply voltage 5V, voltage output.

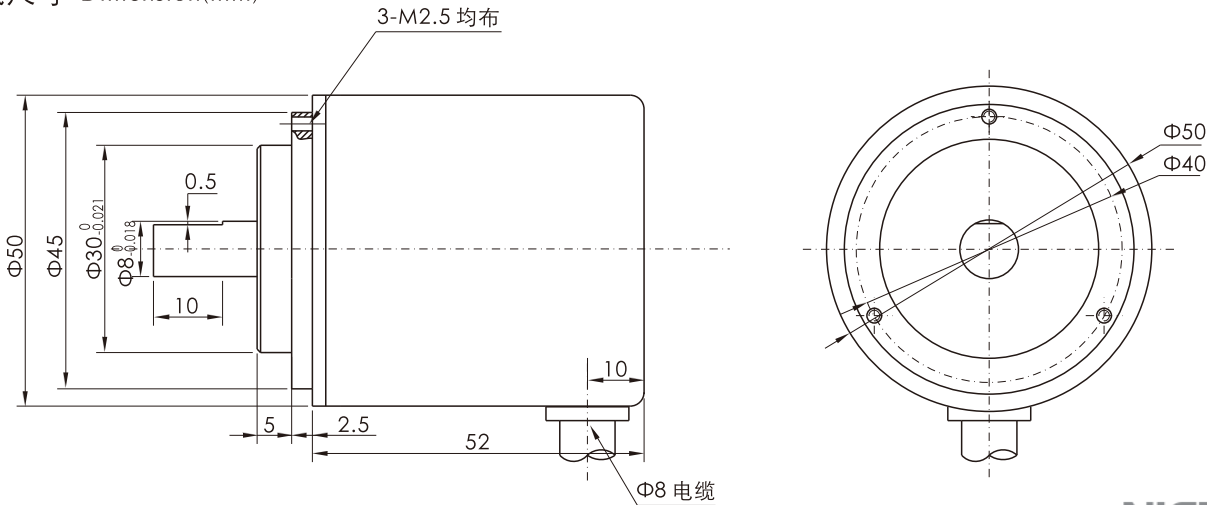
■ 技术参数 Technical data

位数 Bit	8, 9	启动力矩 Starting torque	1.5×10 ⁻³ N · m(+25℃)
输出逻辑 Output logic	正逻辑 Positive logic	轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
输出码制 Output code	Pure binary/Gray	转动惯量 Rotating inertia	2×10 ⁻⁷ Kg · m ²
电源电压 Supply voltage	DC5V或DC 10V~30V	最大转速 Max rotating speed	600r/min
输出电压 V _H Output voltage	≥Vcc×70%	抗震动 Vibration resistance	30m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L Output voltage	≤0.5V	抗冲击 Shock resistance	300m/s ² (XYZ方向各3次, 每次11ms)
消耗电流 Current consumption	≤40mA	防护等级 Protection	IP54
响应频率 Frequency response	20kHz Max	工作温度 Operating temperature	- 10℃ ~ +70℃
上升/下降时间 Rise/fall time	≤1μS	储存温度 Storage temperature	- 20℃ ~ +80℃
注入电流 Injection current	≤40mA	工作湿度 Operating humidity	30~85%RH
测量范围 Measure range	0~360°	重量(不含线) Weight (no cable)	0.2kg
测角误差 Measure error	±1.406°	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

线色 Cable color	红色 Red	黑色 Black	浅蓝 Light blue	深蓝 Deep blue	紫色 Violet	橙色 Orange	灰色 Gray	绿色 Green	黄色 Yellow	紫色 Violet	粉色 Pink	白色 White	屏蔽 Shield
信号 Signal	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	FG

■ 机械尺寸 Dimension(mm)

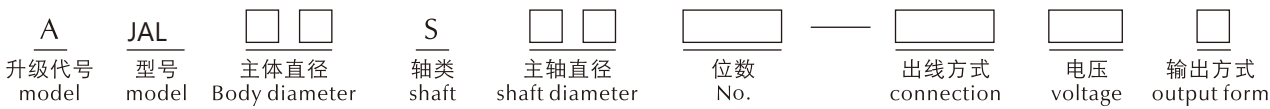


A-JAL38S Series



- 外径Φ38，止口Φ20，位数8~14位
- 轴径Φ6×15，可加工成Φ8，可选用SE或PE联轴节
- 自然二进制码或格雷码，电缆侧出
- Outer diameter Φ38, flange diameter Φ20, resolution from 8 to 14 bit.
- Shaft size Φ6×15, shaft Φ8 available, SE or PE coupling can be choosed.
- Pure binary/Gray output., Side entry cable.

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL38S6-14-G05BS is shaft 6,14 bit, side entry cable, supply voltage 9V pure binary.

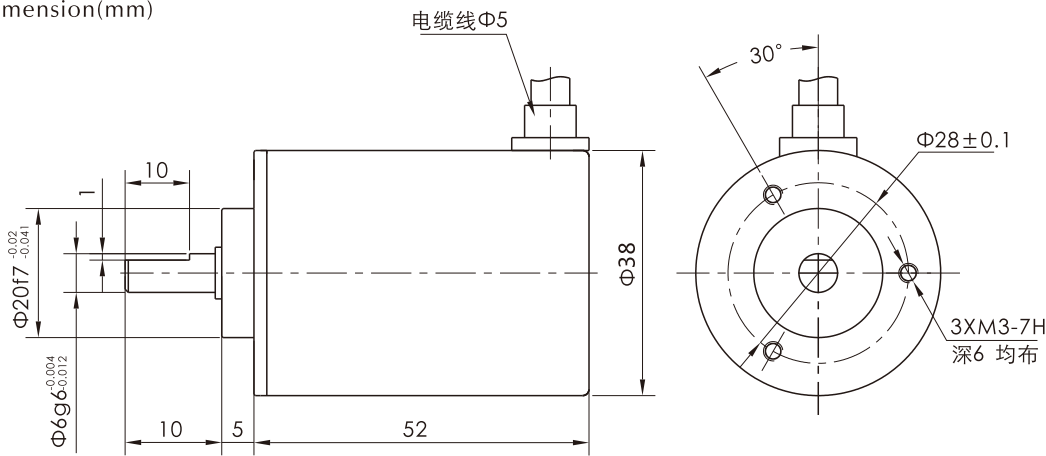
■ 技术参数 Technical data

测角范围 Angle range	0~360°	启动力矩 Starting torque	2×10 ⁻³ N · m(+25℃)
位数 Bit	8~14	轴允许负荷 Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率 Resolution	20 "	转动惯量 Rotating inertia	2×10 ⁻⁷ Kg · m ²
精度 Accuracy	±60 "	最大转速 Max rotating speed	600r/min
工作电压 Operating voltage	DC9V 0.3A	抗震动 Vibration resistance	30m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制 Output code	自然二进制码 pure binary	抗冲击 Shock resistance	300m/s ² (XYZ方向各3次, 每次11ms)
更新率 Refresh	500Hz	防护等级 Protection	IP54
接口方式 Wiring method	Rs485串口 Serial	工作湿度 Operating temperature	30~85%RH
工作温度 Operating temperature	- 40℃ ~ +70℃	重量(不含线) Weight (no cable)	0.3kg
储存温度 Storage temperature	- 45℃ ~ +80℃	附件 Accessories	SE/PE Coupling

■ 接线表 Connection table

脚号 Plug code		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
形式 Form	并口 Parallel	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵	—	
		20	21	22	23	24	25														屏蔽 Shield
		—	—	—	—	—	—														FG
	串口 Serial	1	2	3	4	5	6	7	8	9											屏蔽 Shield
		Vcc	0V	TXD+	TXD-																FG

■ 机械尺寸 Dimension(mm)



- 








- 升级代号 型号 主体直径 轴类 主轴直径 位数 出线方式 电压 输出方式
 model model Body diameter shaft shaft diameter No. connection voltage output form

- | | | | | | |
|------|-----------------------|--------------------|---------|-----------------------|--|
| 测角范围 | Angle range | 0~360° | 启动力矩 | Starting torque | 1.5×10 ⁻³ N·m(+25℃) |
| 位数 | Bit | 10~17 | 轴允许负荷 | Shaft loading | 径向(Radial) 20N 轴向(Axial) 10N |
| 分辨率 | Resolution | 10 " | 转动惯量 | Rotating inertia | 4×10 ⁻⁶ Kg·m ² |
| 精度 | Accuracy | ±30 " | 最大转速 | Max rotating speed | 600r/min |
| 工作电压 | Operating voltage | DC9V | 抗震动 | Vibration resistance | 50m/s ² (10~200Hz)
(XYZ方向各2小时) |
| 输出码制 | Output code | 自然二进制码 pure binary | 抗冲击 | Shock resistance | 980m/s ²
(XYZ方向各3次, 每次6ms) |
| 更新率 | Refresh | 500Hz | 防护等级 | Protection | IP54 |
| 接口方式 | Wiring method | Rs485串口 Serial | 工作湿度 | Operating temperature | 30~85%RH |
| 工作温度 | Operating temperature | - 40℃ ~ +70℃ | 重量(不含线) | Weight (no cable) | 约0.4kg |
| 储存温度 | Storage temperature | - 45℃ ~ +80℃ | 附件 | Accessories | SE/PE Coupling |

- [illegible]

-
- Technical drawing of a cable gland, showing front and top views.
- Front View Dimensions:**
- Total height: 56
 - Main body diameter: $\phi 50$
 - Base diameter: 52
 - Flange thickness: 3
 - Central hole diameter: $\phi 6h7^0_{0.012}$
 - Cable entry diameter: 5 (labeled 电缆线 $\phi 5$)
 - Flange outer diameter: 50
- Top View Dimensions:**
- Flange outer diameter: $\phi 38 \pm 0.2$
 - Screw specification: 4XM4-7H 深8 均布

Absolute Encoder

A cylindrical piezoelectric actuator, likely a piezo stack, with a metal flange and a central shaft. The label on the side includes technical specifications and a CE mark.

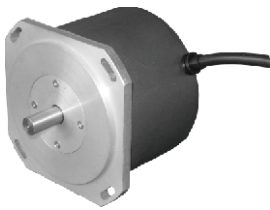
- | | | | | | | | | | |
|---------------|-------------|---|-------------|---|---|---|---|---|---|
| <u>A</u> | <u>JAL</u> |   | <u>S</u> |   |  | — |  |  |  |
| 升级代号
model | 型号
model | 主体直径
Body diameter | 轴类
shaft | 主轴直径
shaft diameter | 位数
No. | | 出线方式
connection | 电压
voltage | 输出方式
output form |

- | | | | | | |
|------|-----------------------|--------------------|---------|-----------------------|--|
| 测角范围 | Angle range | 0~360° | 启动力矩 | Starting torque | 1.5×10 ⁻³ N·m(+25℃) |
| 位数 | Bit | 12~18 | 轴允许负荷 | Shaft loading | 径向(Radial) 20N 轴向(Axial) 10N |
| 分辨率 | Resolution | 5 " | 转动惯量 | Rotating inertia | 1.3×10 ⁻⁵ Kg·m ² |
| 精度 | Accuracy | ±25 " | 最大转速 | Max rotating speed | 600r/min |
| 工作电压 | Operating voltage | DC9V | 抗震动 | Vibration resistance | 50m/s ² (10~200Hz)
(XYZ方向各2小时) |
| 输出码制 | Output code | 自然二进制码 pure binary | 抗冲击 | Shock resistance | 980m/s ²
(XYZ方向各2次, 每次6ms) |
| 更新率 | Refresh | 500Hz | 防护等级 | Protection | IP54 |
| 接口方式 | Wiring method | Rs485串口 Serial | 工作湿度 | Operating temperature | 30~85%RH |
| 工作温度 | Operating temperature | - 40℃ ~ +70℃ | 重量(不含线) | Weight (no cable) | 约0.7kg |
| 储存温度 | Storage temperature | - 45℃ ~ +80℃ | 附件 | Accessories | SE/PE Coupling |

- [illegible]

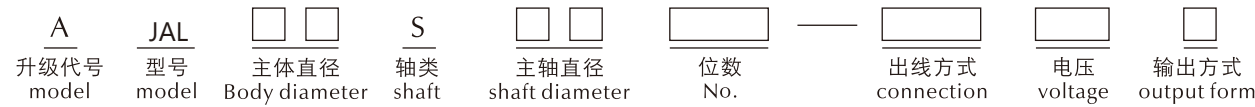
-
- Technical drawing of a cable gland (type 1) showing side and top views with dimensions in mm.
- Side View Dimensions:**
- Overall height: $\Phi 66$
 - Overall width: 80
 - Flange thickness: 3
 - Mounting hole diameter: $\Phi 30g6_{-0.007}^{+0.002}$
 - Internal thread diameter: $\Phi 8g6_{-0.005}^{+0.014}$
 - Internal thread length: 20
- Top View Dimensions:**
- Mounting hole diameter: $\Phi 50 \pm 0.2$
 - Internal thread specification: 4XM4-7H
 - Internal thread depth: 深8
 - Internal thread distribution: 均布 (Evenly distributed)
- Other Labels:**
- 电缆线 $\Phi 5$ (Cable $\Phi 5$)

A-JAL90S Series



- 外径Φ90，止口Φ80，位数14~19位
- 轴径Φ10×20，可加工成Φ15，可选用SE或PE联轴节
- 自然二进制码或格雷码，电缆侧出
- Outer diameter Φ90, flange diameter Φ80, resolution from 14 to 19 bit.
- Shaft size Φ10×20, shaft Φ15 available, SE or PE coupling can be choosed
- Pure binary/Gray output., Side entry cable

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL90S10-19-G05BS is shaft 10, 19 bit, side entry cable, supply voltage 9V pure binary.

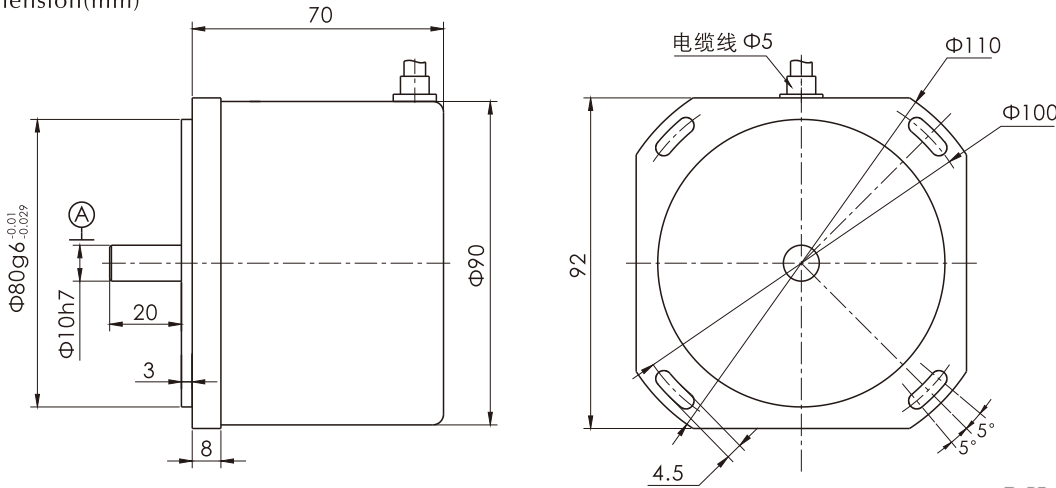
■ 技术参数 Technical data

测角范围	Angle range	0~360°	启动力矩	Starting torque	1.5×10 ⁻³ N · m(+25℃)
位数	Bit	14~19	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率	Resolution	2.5 "	转动惯量	Rotating inertia	1.3×10 ⁻⁵ Kg · m ²
精度	Accuracy	±20 "	最大转速	Max rotating speed	400r/min
工作电压	Operating voltage	DC9V	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制	Output code	自然二进制码 pure binary	抗冲击	Shock resistance	980m/s ² (XYZ方向各2次，每次6ms)
更新率	Refresh	500Hz	防护等级	Protection	IP54
接口方式	Wiring method	Rs485串口 Serial	工作湿度	Operating temperature	30~85%RH
工作温度	Operating temperature	- 40℃ ~ +70℃	重量(不含线)	Weight (no cable)	约0.9kg
储存温度	Storage temperature	- 45℃ ~ +80℃	附件	Accessories	SE/PE Coupling

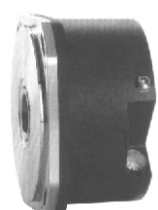
■ 接线表 Connection table

脚号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Plug code																			
形式	并口	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵
		20	21	22	23	24	25												屏蔽
		2 ¹⁷	2 ¹⁸	—	—	—	—												FG
	串口	1	2	3	4	5	6	7	8	9									屏蔽
Form	Serial	Vcc	0V	TXD+	TXD-														FG

■ 机械尺寸 Dimension(mm)

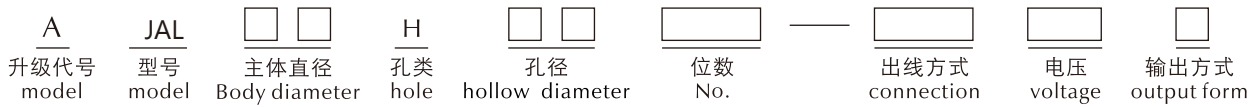


A-JAL90H Series



- 外径Φ90，空心轴，常规孔径Φ25, Φ30
- 输出位数12~19位
- Outer diameter Φ90, hollow shaft, Basic hollow shaft Φ25, Φ30.
- Resolution from 12 to 19 bit.

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL90H25-19-G05BS is shaft 25, 19 bit, side entry cable, supply voltage 5V pure binary.

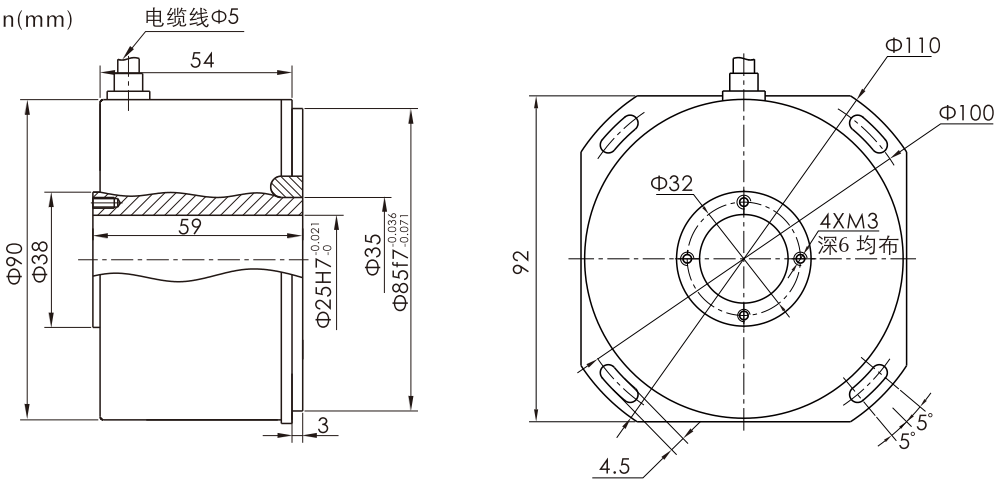
■ 技术参数 Technical data

测角范围	Angle range	0~360°	启动力矩	Starting torque	6×10 ⁻² N · m(+25℃)
位数	Bit	12~19	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率	Resolution	2.5 "	转动惯量	Rotating inertia	2×10 ⁻⁵ Kg · m ²
精度	Accuracy	±20 "	最大转速	Max rotating speed	400r/min
工作电压	Operating voltage	DC5V	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制	Output code	自然二进制码 pure binary	抗冲击	Shock resistance	980m/s ² (XYZ方向各2次，每次6ms)
更新率	Refresh	200Hz	防护等级	Protection	IP54
接口方式	Wiring method	Rs485串口 Serial	工作湿度	Operating temperature	30~85%RH
工作温度	Operating temperature	- 40℃ ~ +70℃	重量(不含线)	Weight (no cable)	约0.9kg
储存温度	Storage temperature	- 45℃ ~ +80℃	附件	Accessories	—

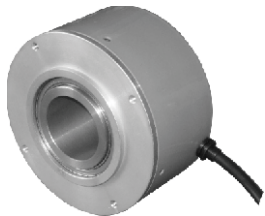
■ 接线表 Connection table

脚号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Plug code																			
形式	并口	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵
		20	21	22	23	24	25												屏蔽
		2 ¹⁷	2 ¹⁸	—	—	—	—												FG
	串口	1	2	3	4	5	6	7	8	9									屏蔽
Form	Serial	Vcc	0V	TXD+	TXD-														FG

■ 机械尺寸 Dimension(mm)

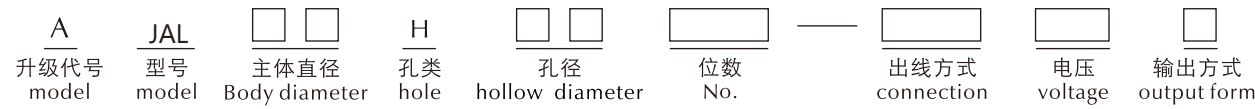


A-JAL140H Series



- 外径Φ140，空心轴，常规孔径Φ20~Φ45
- 输出位数14~20位
- Outer diameter Φ140, hollow shaft, Basic hollow shaft Φ20~Φ45.
- Resolution from 14 to20 bit.

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL140H40-20-G09BS is shaft 40, 20bit, side entry cable, supply voltage 9V pure binary.

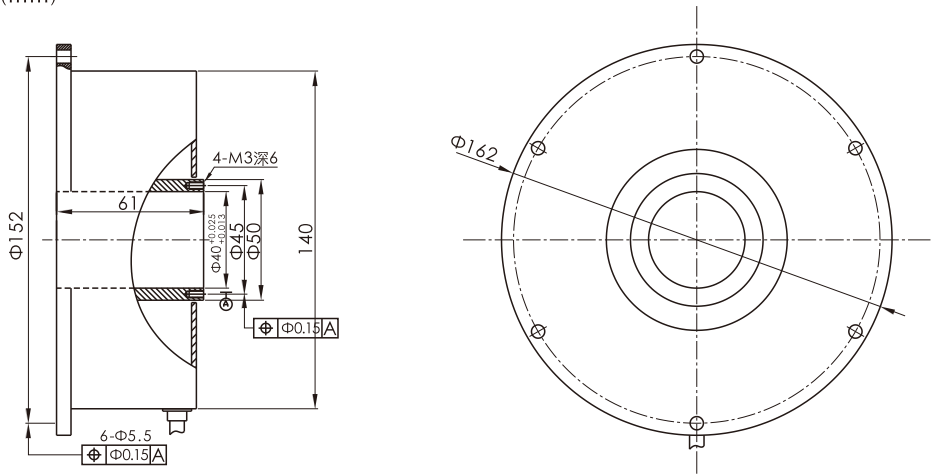
■ 技术参数 Technical data

测角范围	Angle range	0~360°	启动力矩	Starting torque	$6\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$
位数	Bit	14~20	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率	Resolution	1.25 "	转动惯量	Rotating inertia	$2\times10^{-5}\text{Kg}\cdot\text{m}^2$
精度	Accuracy	±10 "	最大转速	Max rotating speed	300r/min
工作电压	Operating voltage	DC9V	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制	Output code	自然二进制码 pure binary	抗冲击	Shock resistance	980m/s ² (XYZ方向各2次，每次6ms)
更新率	Refresh	500Hz	防护等级	Protection	IP54
接口方式	Wiring method	Rs485串口 Serial	工作湿度	Operating temperature	30~85%RH
工作温度	Operating temperature	- 40℃ ~ +70℃	重量(不含线)	Weight (no cable)	约1.2kg
储存温度	Storage temperature	- 45℃ ~ +80℃	附件	Accessories	板弹簧 Elastic mounting plate

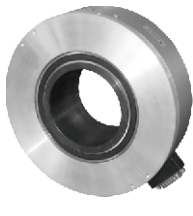
■ 接线表 Connection table

脚号 Plug code		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
形式 Form	并口 Parallel	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵	2 ¹⁶	
		20	21	22	23	24	25													屏蔽 Shield	
		2 ¹⁷	2 ¹⁸	2 ¹⁹	—	—	—														FG
	串口 Serial	1	2	3	4	5	6	7	8	9											屏蔽 Shield
		Vcc	0V	TXD+	TXD-																FG

■ 机械尺寸 Dimension(mm)

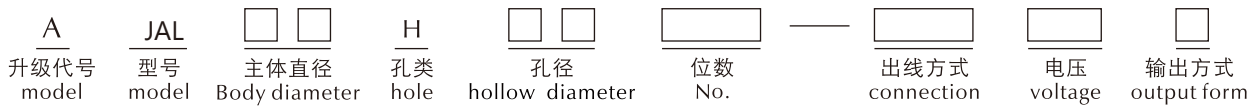


A-JAL178H Series



- 外径Φ178，空心轴，常规孔径Φ40~Φ60
- 输出位数16~21位
- Outer diameter Φ178, hollow shaft, Basic hollow shaft Φ40~Φ60.
- Resolution from 16 to21 bit.

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL178H60-21-G12BS is shaft 60, 21bit, side entry cable, supply voltage 9V pure binary.

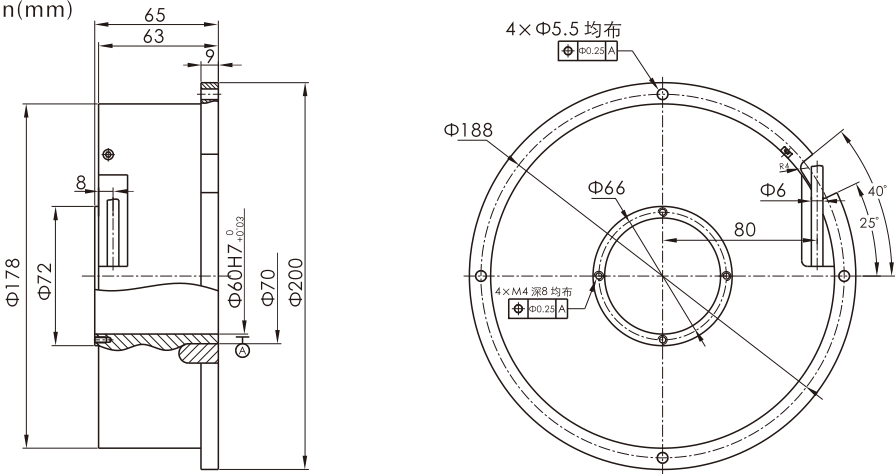
■ 技术参数 Technical data

测角范围	Angle range	0~360°	启动力矩	Starting torque	$6\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$
位数	Bit	16~21	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率	Resolution	0.6 "	转动惯量	Rotating inertia	$2\times10^{-5}\text{Kg}\cdot\text{m}^2$
精度	Accuracy	±5 "	最大转速	Max rotating speed	400r/min
工作电压	Operating voltage	DC9V	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制	Output code	自然二进制码 pure binary	抗冲击	Shock resistance	980m/s ² (XYZ方向各2次，每次6ms)
更新率	Refresh	500Hz	防护等级	Protection	IP54
接口方式	Wiring method	Rs485串口 Serial	工作湿度	Operating temperature	30~85%RH
工作温度	Operating temperature	- 40℃ ~ +70℃	重量(不含线)	Weight (no cable)	约1.8kg
储存温度	Storage temperature	- 45℃ ~ +80℃	附件	Accessories	—

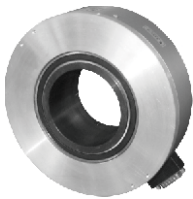
■ 接线表 Connection table

脚号 Plug code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
形式 Form	并口 Parallel	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵	2 ¹⁶
		20	21	22	23	24	25													屏蔽 Shield
		2 ¹⁷	2 ¹⁸	2 ¹⁹	2 ²⁰	—	—													FG
	串口 Serial	1	2	3	4	5	6	7	8	9										屏蔽 Shield
		Vcc	0V	TXD+	TXD-															FG

■ 机械尺寸 Dimension(mm)

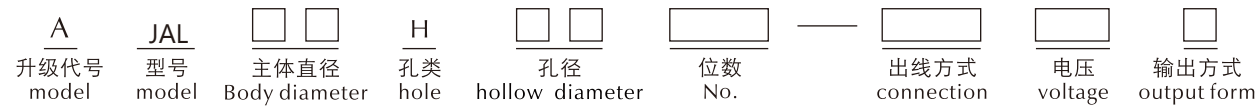


A-JAL230H Series



- 外径Φ230，空心轴，常规孔径Φ20~Φ100
- 输出位数可达22位
- Outer diameter Φ230, hollow shaft, Basic hollow shaft Φ20~Φ100.
- Resolution up to 22 bit.

■ 型号说明 Explanation of model



■ 型号举例 For example

A-JAL230H60-22-G12BS is shaft 60, 22 bit, side entry cable, supply voltage 12V pure binary.

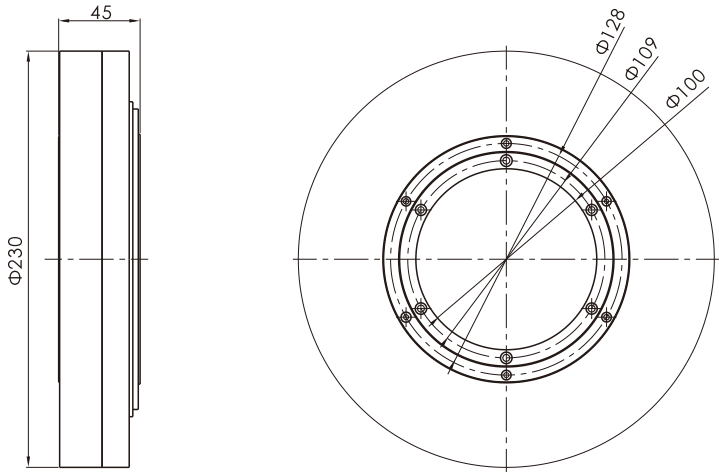
■ 技术参数 Technical data

测角范围	Angle range	0~360°	启动力矩	Starting torque	$6\times10^{-2}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$
位数	Bit	22	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
分辨率	Resolution	0.08 "	转动惯量	Rotating inertia	$2\times10^{-5}\text{Kg}\cdot\text{m}^2$
精度	Accuracy	±2 "	最大转速	Max rotating speed	200r/min
工作电压	Operating voltage	DC12V	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出码制	Output code	自然二进制码 pure binary	抗冲击	Shock resistance	980m/s ² (XYZ方向各2次，每次6ms)
更新率	Refresh	500Hz	防护等级	Protection	IP54
接口方式	Wiring method	Rs485串口或并口	工作湿度	Operating temperature	30~85%RH
工作温度	Operating temperature	- 40℃ ~ +70℃	重量(不含线)	Weight (no cable)	约5kg
储存温度	Storage temperature	- 45℃ ~ +80℃	附件	Accessories	—

■ 接线表 Connection table

脚号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Plug code																			
形式	并口	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵
		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
	串口	2 ¹⁷	2 ¹⁸	2 ¹⁹	2 ²⁰	2 ²¹	2 ²²	2 ²³	—	—	—	—	—	—	—	—	—	—	—
		1	2	3	4	5	6	7	8	9									
		Vcc	0V	TXD+	TXD-														

■ 机械尺寸 Dimension(mm)



JNL Series



- 外径Φ43，X型止口Φ24，Y型止口Φ40
- X型轴径Φ6×12，Y型轴径Φ8×12，可选用SE或PE联轴器
- 刀架用编码器，有XY两种外形，自然二进制数出
- Outer diameter Φ43, X model flange diameter Φ24, Y model flange diameter Φ40.
- X model shaft size Φ6×12, Y model shaft size Φ8×12, SE or PE coupling can be choosed.
- Used for cutting tools device, with X and Y models. Dure binary code output.

■ 型号说明 Explanation of model



■ 型号举例 For example

JNL6-8-X-G24P-A is shaft diameter Φ6, 8 bit, X model, side entry cable, supply voltage 24V, PNP, positive logic.

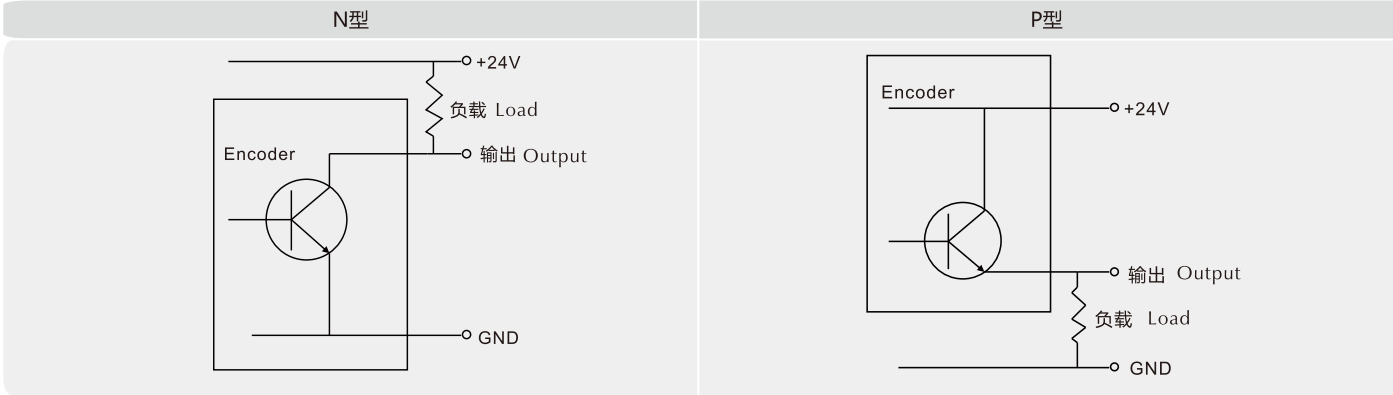
■ 技术参数 Technical data

工位数	Resolution	4, 6, 8, 10, 12 division	启动力矩	Starting torque	$1.5\times10^{-3}\text{N}\cdot\text{m}(+25^{\circ}\text{C})$
输出逻辑	Output logic	正逻辑 Positive logic	轴允许负荷	Shaft loading	径向(Radial) 20N 轴向(Axial) 10N
输出码制	Output code	自然二进制 PureBinary	转动惯量	Rotating inertia	$2\times10^{-7}\text{Kg}\cdot\text{m}^2$
电源电压	Supply voltage	DC24V±5%	最大转速	Max rotating speed	180r/min
输出电压 V _H	Output voltage	≥Vcc×70%	抗震动	Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 V _L	Output voltage	≤0.5V	抗冲击	Shock resistance	980m/s ² (XYZ方向各3次，每次6ms)
消耗电流	Current consumption	≤60mA	防护等级	Protection	IP65
响应频率	Frequency response	5kHz Max	工作温度	Operating temperature	- 10℃ ~ +70℃
上升/下降时间	Rise/fall time	—	储存温度	Storage temperature	- 20℃ ~ +80℃
注入电流	Injection current	≤50mA	工作湿度	Operating humidity	30~85%RH
测量范围	Measurement range	0~360°	重量(不含线)	Weight (no cable)	约0.2kg
测角误差	Measurement error	±20′	附件	Accessories	SE/PE Coupling

■ 接线表 Connection table

线色	Cable color	红 Red	黑 Black	棕 Brown	白 White	绿 Green	黄 Yellow	蓝 Blue	粉 Pink	屏蔽
信号	Signal	DC 24V	0V	TP(选通)	2 ⁰	2 ¹	2 ²	2 ³	EP(奇偶校验)	FG

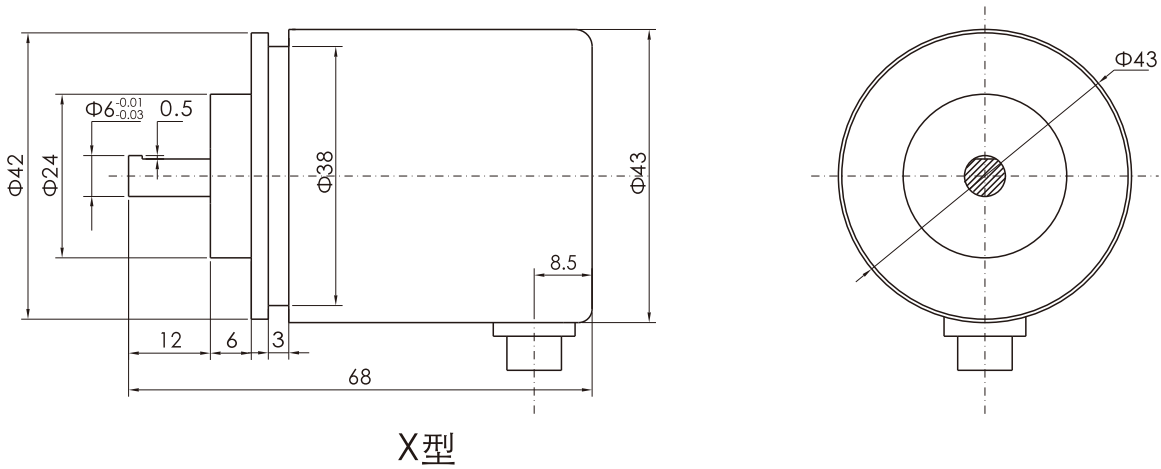
■ 接口方式 Interface model



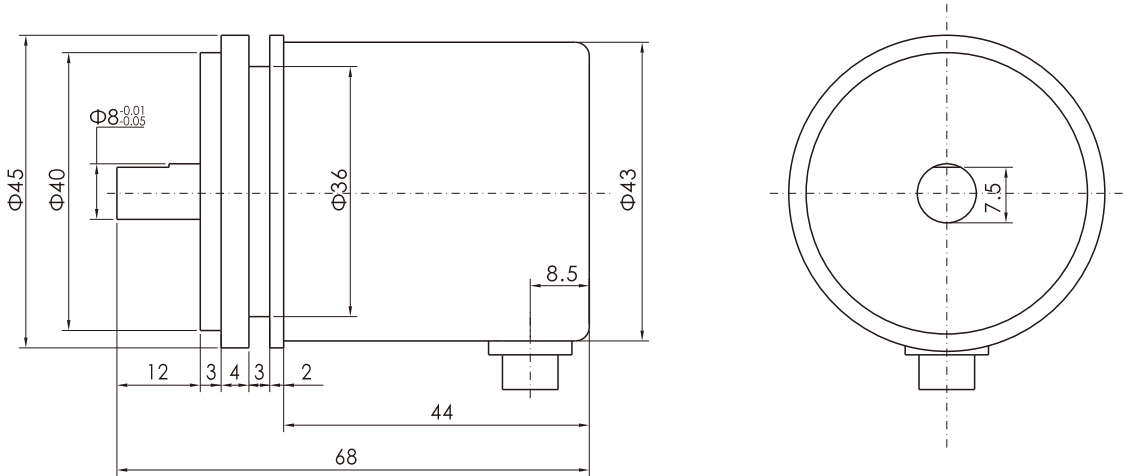
■ 输出编码 Output code

工位		1	2	3	4	5	6	7	8	9	10	11	12
输出信号 Output signal	TP	1	1	1	1	1	1	1	1	1	1	1	1
	2 ⁰	1	0	1	0	1	0	1	0	1	0	1	0
	2 ¹	0	1	1	0	0	1	1	0	0	1	1	0
	2 ²	0	0	0	1	1	1	1	0	0	0	0	1
	2 ³	0	0	0	0	0	0	0	1	1	1	1	1
	EP	1	1	0	1	0	0	1	1	0	0	1	0

■ 机械尺寸 Dimension(mm)



X型



Y型

JADD Series



- 外径Φ58，止口Φ50
- 轴径Φ10，可选用SF或PF联轴节
- 多圈绝对式编码器，可实现多圈测量
- Outer diameter Φ58, flange diameter Φ50
- Shaft size Φ10, SF or PF coupling can be chosen.
- Multi-circle absolute encoder, can realize multi-circle measurement.

■ 型号说明 Explanation of model



■ 型号举例 For example

JADD5810-4096X29-C10-30BS is outer diameter Φ58, shaft diameter Φ10, 4096P/R, multi circle 29, side entry plug , supply voltage 10-30V, Rs485 pure binary.

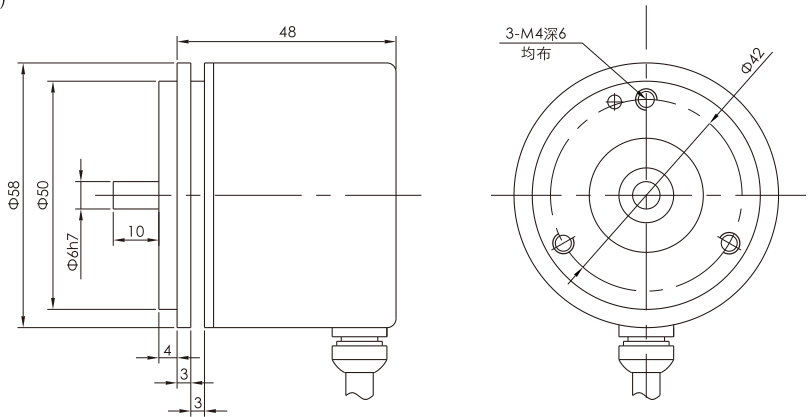
■ 技术参数 Technical data

基础码 Resolution	12位	启动力矩 Starting torque	5×10 ⁻³ N·m(+25℃)
多圈位数 Multi circle No.	10-17位	转动惯量 Rotating inertia	1.3×10 ⁻⁶ Kg·m ²
工作电压 Operating voltage	DC10-30V	抗震动 Vibration resistance	50m/s ² (10~200Hz) (XYZ方向各2小时)
输出电压 Output voltage	VH: ≥Vcc×85% VL: ≤0.5V	抗冲击 Shock resistance	980m/s ² (XYZ方向各3次)
消耗电流 Current consumption	≤200mA	角加速度 Angular acceleration	1.0×10 ⁴ rad/s ²
编码类型 Encode type	自然二进制 Pure binary	防护等级 Protection	IP64
接口方式 Wiring method	Rs485	工作寿命 Working life	MTBF≥5000h(25℃, 200rpm)
响应频率 Frequency response	50KHz	工作温度 Operating temperature	-10℃~+60℃
上升/下降时间 Rise/fall time	≤1μS	储存温度 Storage temperature	-25℃~+85℃
最大转速 Max rotating speed	10000r/min	工作湿度 Operating humidity	30~85%(无结露)
轴允许负荷 Shaft loading	径向(Radial) 50N 轴向(Axial) 50N	重量(不含线) Weight (no cable)	0.4kg

■ 接线表 Connection table

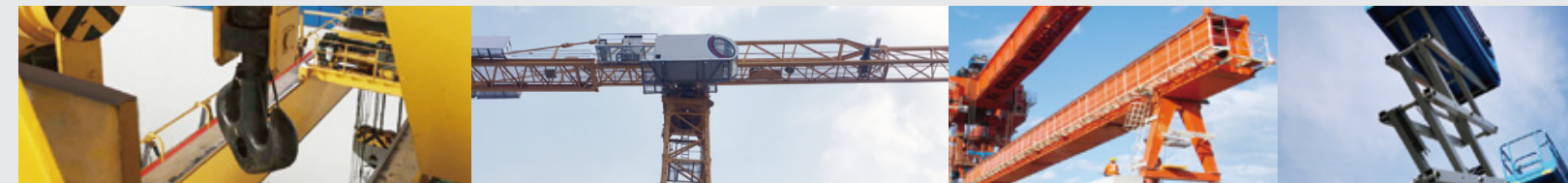
脚号 Plug code		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
形式 Form	并口 Parallel	Vcc	0V	2 ⁰	2 ¹	2 ²	2 ³	2 ⁴	2 ⁵	2 ⁶	2 ⁷	2 ⁸	2 ⁹	2 ¹⁰	2 ¹¹	2 ¹²	2 ¹³	2 ¹⁴	2 ¹⁵	2 ¹⁶
		20	21	22	23	24	25													屏蔽 Shield
		2 ¹⁷	2 ¹⁸	2 ¹⁹	—	—	—													FG
	串口 Serial	1	2	3	4	5	6	7	8	9										屏蔽 Shield
		Vcc	0V	TXD+	TXD-															

■ 机械尺寸 Dimension(mm)



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■ INCREMENTAL ENCODER EDK100H Series

Sensing method Optical
Housing size Φ101 mm
Hollow shaft
Φ25、Φ30、Φ35、Φ38、Φ40、Φ42、Φ45 mm
Max. resolution 3000 PPR
Supply voltage 5VDC, 5-30VDC, 9-26VDC
Protection IP66

■ INCREMENTAL ENCODER EDK5802H Series

Sensing method Optical
Housing size Φ58 mm
Hollow shaft Φ10、Φ12、Φ14 mm
Max. resolution 1200 PPR
Supply voltage 5VDC, 5-30VDC, 9-26VDC
Protection IP66

■ INCREMENTAL ENCODER ECK58B Series

Sensing method Optical
Housing size Φ58mm
Hollow shaft Φ10、Φ12mm
Max. resolution 1200PPR
Supply voltage 9-26、5-30VDC
Protection IP66

■ HEAVY-DUTY ENCODER EHK99H Series

Sensing method Optical
Shaft insulation shaft insulation reach to 2.5KV
Housing size Φ99.5mm
Hollow shaft Φ12、Φ16mm
Axis of cone 17 (1:10)
Max. resolution 2500PPR
Supply voltage 5VDC, 9-30VDC
Protection IP66



■ SINGLETURN ABSOLUTE ENCODER JSCS38 Series

Sensing method Magnetic
Housing size Φ38mm
Shaft diameter Solid shaft Φ4、Φ6mm
Blind hollow shaft Φ6、Φ8mm
Measurement range 0~360°
Max. resolution 14bit (16384)
Supply voltage 5 V DC, 10-30 V DC
Protection IP54/IP65
Modbus-rtu Adjusting the participant address,
Surge voltage protection,
Reverse polarity protection,
ESD protection

■ MULTITURN ABSOLUTE ENCODER JSCA50 series

Sensing method Magnetic
Functional principle Multiturn
Mltiturn technology Mechanical gears without batteries
Housing size Φ50mm
Solid shaft with keyway Φ25 mm,
Solid shaft Φ6、Φ8mm,
Blind hollow shaft Φ8、Φ10mm
Max. resolution 20Bit
Steps per turn 4096/12Bit
Number of turn 256/8Bit
Interface CANopen, CAN2.0B, Modbus-RTU, RS485
Supply voltage DC5V, DC10-30V
Protection IP54, IP65

■ MULTITURN ABSOLUTE ENCODER JDCA58 series

Sensing method Magnetic
Functional principle Multiturn
Mltiturn technology Mechanical gears without batteries
Housing size Φ58mm
Shaft diameter Solid shaft Φ6mm、Φ10mm
Blind hollow shaft Φ10、Φ12、Φ14mm
Max. resolution 25Bit
Steps per turn 8192/13Bit
Number of turn 4096/12Bit
Interface CANopen, CAN2.0B, Modbus-RTU,
Supply voltage DC5V, DC10-30V
Protection IP65/IP67

■ MULTITURN ABSOLUTE ENCODER NDDA58 series

Sensing method Optical
Housing size Φ58 mm
Mltiturn technology Mechanical gears without batteries
Housing size Φ58mm
Shaft diameter solid shaft Φ6、Φ10mm
Max. resolution 28Bit
Steps per turn 65536/16Bit
Number of turn 4096/12Bit
Interface PROFIBET
Supply voltage DC10-30V
Protection IP65/IP67



■ HEAVY-DUTY ENCODER EHK9901H Series

Encoder with redundant signals
Sensing method optical
Shaft insulation shaft insulation reach to 2.5KV
Housing size Φ99.5mm
hollow shaft Φ12、Φ16mm
Max. resolution 2500PPR
Supply voltage 5VDC, 9-30VDC
Protection IP66

■ HEAVY-DUTY ENCODER +OVERSPEED SWITCH EHK90SK+MS Combination Series

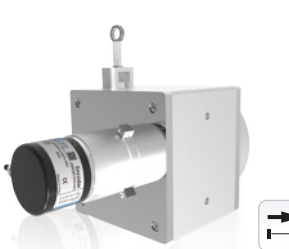
Constitution Incremental encoder
+ Mechanical speed switch
Sensing method Optical
+ Mechanical centrifugal
Housing size Φ90mm
Solid shaft Φ11、Φ12、Φ15mm
Max. resolution 2500PPR
Speed range 750~3200rpm
Protection IP66

■ HEAVY-DUTY ENCODER +OVERSPEED SWITCH EHK105HS+MS Combination Series

Constitution Incremental encoder
+ Mechanical speed switch
Housing size Φ105mm
Solid shaft Φ17mm, Φ16mm
Max. resolution 2500PPR
Speed range 750-3500RPM
Protection IP54/IP66

■ Heavy-duty encoder MS115 Series

Induction principle mechanical centrifugal type
Housing size Φ115mm
Solid shaft Φ11mm
Flange B10
Speed range 750~3500rpm
Protection IP54/IP65
Switching output: 1 output, speed can be fixed
Minimum switching current 50mA
Output switch capacity ≤6A/230VAC,
≤1A/125VDC



■ LINEAR ENCODERS LTF50 Series

Output Form Figure
Measure range 0~1000mm
Resolution ≥0.016mm/p
Accuracy 0.05%FS
Operation voltage 5VDC, 5-30VDC, 9-26VDC
Response frequency Max 300KHz

■ LINEAR ENCODERS LTF80 Series

Output Form
Incremental/Absolute
Measure range 0~4000mm
Resolution ≥0.02mm/p
Accuracy 0.05%FS
Wheel 200mm
Operation voltage 5VDC,
5-30VDC, 10-30VDC
Response frequency Max 300KHz

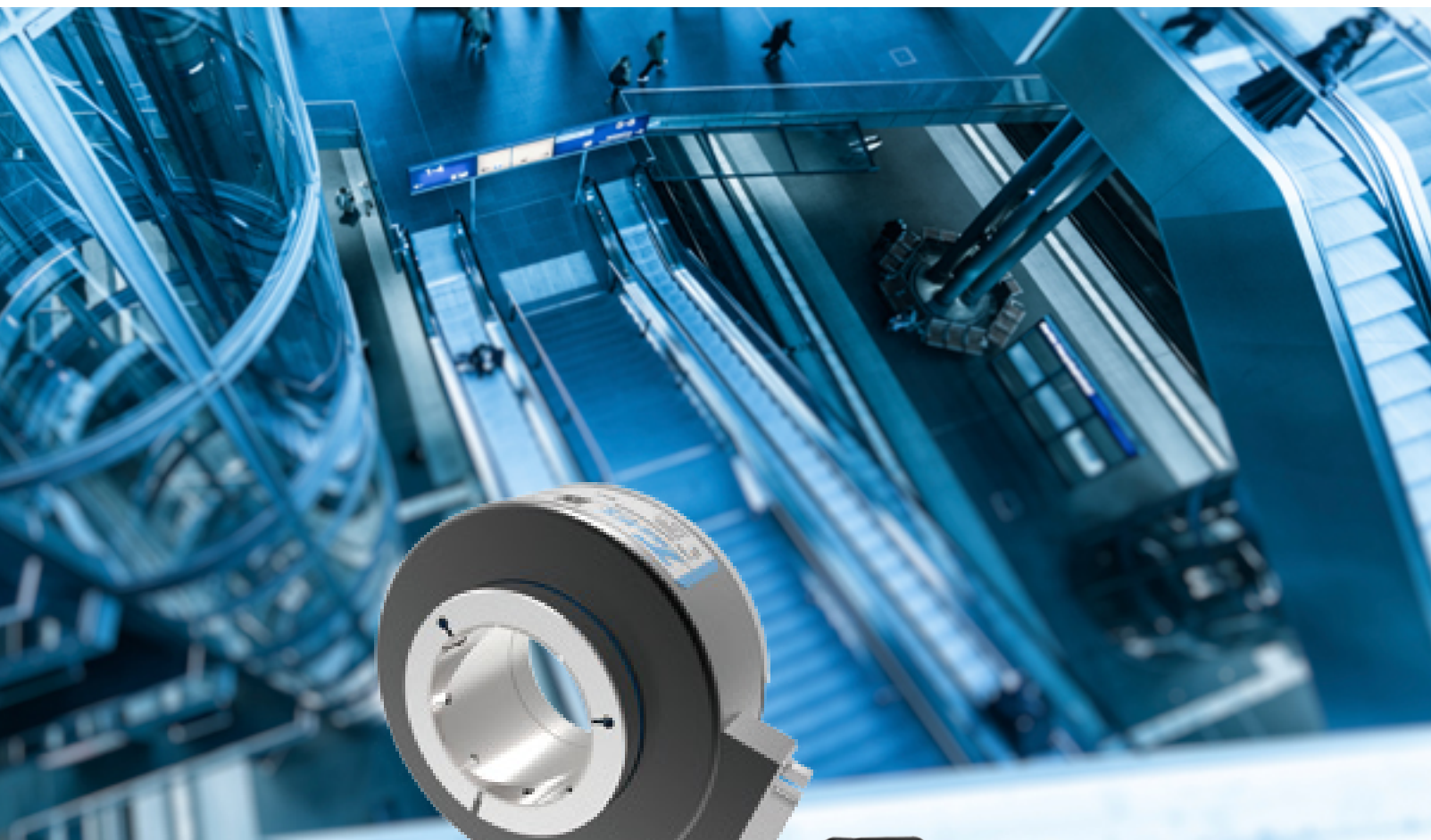
■ LINEAR ENCODERS LTF109 Series

Output Form Potentiometer
Measure range 0~3000mm
Resolution 0.1%FS
Operation voltage 5VDC, 5-30VDC, 10-30VDC
Response frequency Max 300KHz

■ LINEAR ENCODERS LTF130 Series

Output Form
Incremental/Absolute
Measure range 0~12000mm
Resolution ≥0.066mm/p
Accuracy 0.05%FS
Operation voltage 5VDC, 5-30VDC, 10-30VDC
Response frequency Max 300KHz

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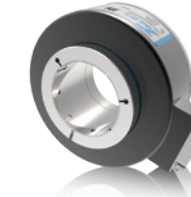
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ENCODER SERIES



■ **EDK100H series Incremental encoder**
Position and speed feedback
Sensing method : Optical
Housing size $\Phi 101$ mm
Hollow shaft $\Phi 25$ · $\Phi 30$ · $\Phi 35$ · $\Phi 38$ · $\Phi 40$ · $\Phi 42$ · $\Phi 45$ mm
Max. resolution 3000 PPR
Supply voltage 5VDC · 5-30VDC · 9-26VDC
Protection IP66



■ **EE series Incremental encoder**
Position and speed feedback
Sensing method : Optical
Housing size $\Phi 100.5$ mm
Hollow shaft $\Phi 30$ · $\Phi 35$ · $\Phi 38$ · $\Phi 40$ · $\Phi 42$ · $\Phi 45$ mm
Max. resolution 3000 PPR
Supply voltage 5VDC · 5-30VDC · 9-26VDC
Protection IP54



■ **ESG58S series Incremental encoder**
Position and speed feedback
Sensing method : Optical
Housing size $\Phi 58$ mm
Solid shaft $\Phi 10$ mm
Max. resolution 5000 PPR
Supply voltage 5VDC · 5-30VDC · 9-26VDC
Protection IP54/IP65



■ **ESG38B series Incremental encoder**
Encoder for door machine and speed limit
Suitable for narrow installation space
Sensing method : Optical
Housing size $\Phi 38$ mm
Blind hollow shaft $\Phi 5$ · $\Phi 6$ · $\Phi 8$ mm
Max. resolution 2500PPR
Supply voltage 5VDC · 5-30VDC · 9-26VDC
Protection IP54



■ **ESK5801H series Incremental encoder**
Position and speed feedback
Sensing method : Optical
Housing size $\Phi 58$ mm
Hollow shaft $\Phi 10$ · $\Phi 12$ · $\Phi 14$ mm
Max. resolution 5000 PPR
Supply voltage 5VDC · 5-30VDC · 9-26VDC
Protection IP54/IP65



■ **EWH38H series Incremental magnetic encoder**
Position and speed feedback
Induction principle : Magnetic
Inductive probe dimension 38mm*16.2mm*22mm
Gear hollow shaft $\Phi 15$ mm- $\Phi 290$ mm optional
Max. resolution 4096PPR
Supply voltage DC5V
Protection IP68



■ **JDCA58S Series Absolute Encoder**
Sensing method Magnetic
Functional principle Multiturn
Housing size $\Phi 58$ mm
Solid shaft $\Phi 6$ · $\Phi 10$ mm
Max. Resolution 25Bit
Steps per turn 8192/13Bit
Number of turn 4096/12Bit
Interface Modbus-RTU,CANopen
Protection IP65/IP67



■ **JDCA58S Series Absolute Encoder**
Sensing method Magnetic
Functional principle Multiturn
Housing size $\Phi 58$ mm
Blind hollow shaft $\Phi 10$ · $\Phi 12$ · $\Phi 14$ mm
Max. Resolution 25Bit
Steps per turn 8192/13Bit
Number of turn 4096/12Bit
Interface Modbus-RTU,CANopen
Protection IP65/IP67



■ **JDDA58 series Absolute Encoder**
Functional principle Optical
Housing size $\Phi 58$ mm
Solid shaft $\Phi 6$ mm · $\Phi 10$ mm
Blind hollow shaft $\Phi 10$ · $\Phi 12$ · $\Phi 14$ mm
Max. resolution 28Bit
Steps per turn 65536/16Bit
Number of turn 4096/12Bit
Interface Modbus-RTU,CANopen,SSI
Protection IP65/IP67