

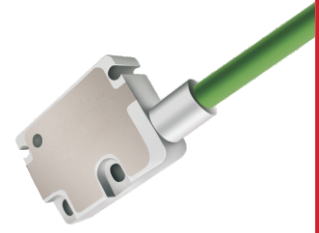
MUJIE 慕杰[®]

YOUR AUTOMATION.YOUR MUJIE!

增量式磁栅编码器MBG系列 Incremental magnetic grid encoder MBG series

高精度、非接触式高精度测量、运行精密准确、自由设定分辨率、可按要求制定输出频率，间隙公差大、防尘防湿耐脏、无限的测量距离

High precision, non-contact high-precision measurement, precise and accurate operation, freely set resolution, output frequency can be set according to requirements, large gap tolerance, dust, moisture, dirt and unlimited measurement distance



► 型号说明 Model Explanation

M	BG	25	-Z1	P2	V5	D1	L1	-R1	-300	□	□
基本型号 Model M:常规增量型 Incremental encoder M□:特殊型号定义 Special definition	BG:增量式磁栅编码器 Incremental magnetic grid encoder	读头宽度: Read head width: 25:25mm	参考信号 Reference signal Z0:无 Z1:循环信号 Z3:来自参考点	磁极距: Magnetic pole distance: P2:2mm P5:5mm	电压 Voltage: V5:5V V732:7-32V	接口: Interface: D1:RS422 D3:推挽式 TTL push pull TTL	线缆长度 Cable L1:1m L2:2m(标准)	分辨率: resolving power: R1:1mm R2:2mm R3:3mm (标准的磁极距)	最大输出频率: Maximum output frequency: F1000	插头 可定制 Plug Custo mizable	客户定制 Customized informat

► 电缆线色说明 Cable Color Explanation

信号线Signal	VCC	0V	A	B	Z	A/	B/	Z/	屏蔽线Shield
4芯电缆线 4wires	红Red	黑Black	绿Green	灰Gray	-	-	-	-	N.C
8芯电缆线8 wires	红Red	黑Black	绿Green	灰Gray	棕Brown	黄Yellow	蓝Blue	白White	N.C

注1: 电缆颜色若有更改, 恕不另行通知, 请以编码器标签或说明书上的颜色定义为准。Note1: Please refer to color table or product instruction to connect wires. Change of wire color will not be informed respectively.
注2: 电缆线标准线长2米, 如需其他规格在订货中备注说明。Note2: Standard cable length is 2m. Other length can be customized.

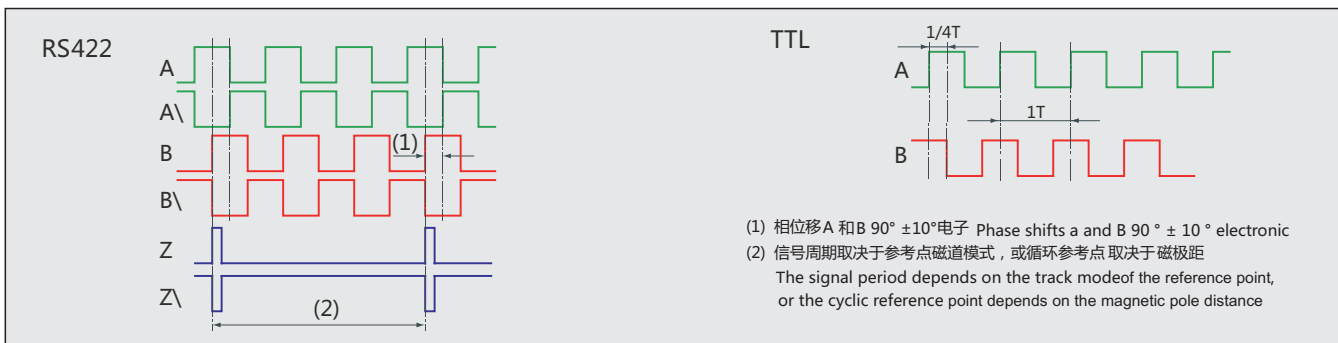
► 电缆线色说明 Cable Color Explanation

	信号 Signal	-	Z	B	A	0V	Z/	B/	A/	VCC	屏蔽线 Shield
	脚位 Foot position	1	2	3	4	5	6	7	8	9	N.C
	颜色 colour	-	黄Yellow	白White	绿Green	红Red	棕Brown	蓝Blue	灰Gray	黑Black	N.C

► 技术规格 Specification

检测范围 Detection Range	
供电电压 Supply voltage	D5-24V±5%
磁间距 Magnetic distance	5mm或 or 2mm (可选 Optional)
分辨率 Resolving power	1um/2um/3um
系统精度 System accuracy	±(0.025+0.02*L)mm
输出频率 output frequency	500KHz (可选 Optional)
带载电流 On load current	< 50mA
输出负载限流 Output load current limiting	< 90mA
输出电平 Output level	5V默认 Default (24V选配 Optional)
绝缘阻抗 Insulation impedance	20MΩ以上 Above
耐压 Withstand voltage	500VAC(50/60Hz, 时间1分钟, 端子与外壳之间) Time 1 minute, between terminal and housing
最大速度 Maximum speed	< 1.5m/s(5um分辨率 Resolving power)
线缆长度 Cable length	标准2 m 可按要求延长至5m Standard 2m can be extended to 5m as required
防护等级 Degree of protection	Ip67
工作温度 Working temperature	-20° ... +70° C
储存温度 Storage temperature	-20° ... +80° C

► 输出信号 output signal



编码器/磁栅尺
Encoder/Magnetic Scale

位移/倾角/计数器
Displacement /Inclination /Counter

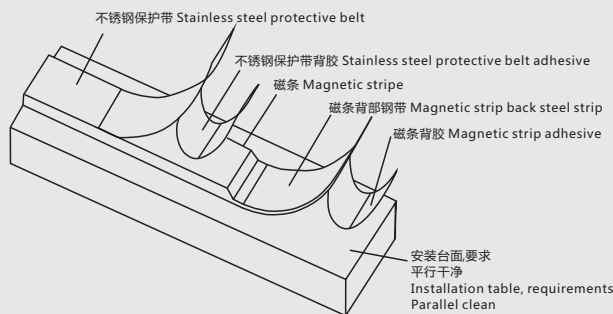
接近/加速度/温度
Proximity /Acceleration /Temperature

光电/超声波/区域
Photoelectric /Ultrasonic /Area

压力/称重
Pressure / load cell

联轴器/附件
Couplings /Accessories

► 安装尺寸图 Mounting Dimensions(单位Unit:mm)



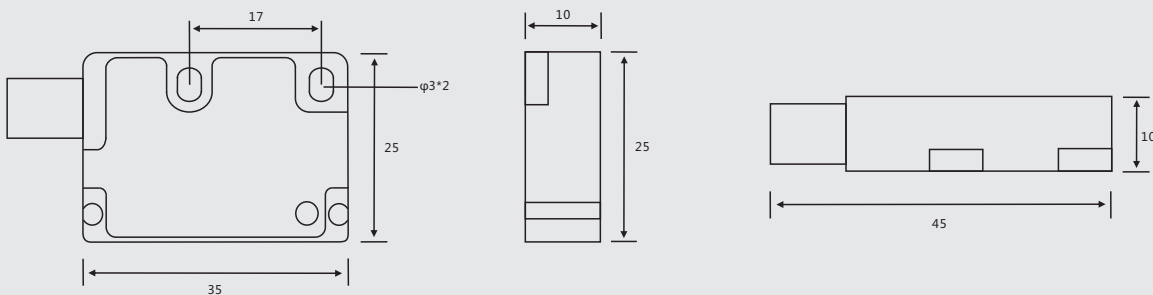
1. 粘贴的表面：磁带需要粘贴于清洁、平整、干燥的机台表面，清理机台最好的溶剂是浓度50%的酒精；
1. Sticking surface: The tape needs to be pasted on the clean, flat and dry surface of the machine. The best solvent for cleaning the machine is 50% alcohol;
2. 粘贴温度：避免在表面温度低于10℃时进行粘贴，因为在这种情况下，双面胶变得坚硬，很难保证粘贴效果；
2. Paste temperature: Avoid pasting when the surface temperature is lower than 10 °C, because in this case, the double-sided adhesive becomes hard and it is difficult to ensure the paste effect;
3. 将磁带背胶撕开一个缺口，逐渐的平行的贴在安装台面上；安装完磁带以后，再粘贴保护钢带到磁带上；
3. Tear a gap in the tape backing, and gradually paste it on the installation platform in parallel; After installing the tape, stick the protective steel tape onto the tape;
4. 粘贴至少48个小时以后，磁带会达到最佳的粘贴效果；
4. After pasting for at least 48 hours, the tape will achieve the best pasting effect;

注意：1. 强磁不能紧靠磁带表面，否则磁带可能会失效；

2. 为了保证磁带的精度，避免重压磁带，安装时顺一个方向贴磁带；

Note: 1. The strong magnetic field cannot be close to the tape surface, otherwise the tape may become invalid;

2. To ensure the accuracy of the tape and avoid heavy pressure on the tape, stick the tape in one direction during installation;



1. 读头上有M3的螺纹孔，用于固定读头，也可以用M2.5*15螺栓穿过读头上螺纹孔来固定读头；

1. There is M3 threaded hole on the reading head for fixing the reading head, or M2.5 * 15 bolt can be used to pass through the threaded hole on the reading head to fix the reading head;

2. 安装距离：读数头与磁栅尺的距离越小精度越高(0.5mm以内比较合适)；

2. Installation distance: the smaller the distance between the reading head and the magnetic grid ruler, the higher the accuracy (within 0.5mm is appropriate);

3. 安装指示灯：绿灯表示计数正常；

红灯表示故障：(1) 读头与磁条间距过大或尺带损坏；(2) 接地不良导致外部干扰过强；

3. Installation indicator: green indicates normal counting; The red light indicates failure: (1) The distance between the reading head and the magnetic stripe is too large or the tape is damaged; (2) Excessive external interference due to poor grounding;

接线要求：

Wiring requirements:

1. 读头为LINE-DRIVER输出，如果计数设备不能完整的读取信号，需要对输出线做好屏蔽和隔离；
1. The reading head is LINE-DRIVER output. If the counting device cannot read the signal completely, the output line needs to be shielded and isolated;

2. 布线要求：请远离干扰源（例如：变频器、驱动器等），尽量单独走线，不要和动力线一起走线；
2. Wiring requirements: please keep away from interference sources (such as frequency converter, driver, etc.), and try to route separately rather than with power lines;

3. 屏蔽要求：屏蔽线良好接地能保证磁读头的正常运行，接地阻抗必须符合规范(接地电阻≤4欧姆)；

3. Shielding requirements: good grounding of the shielded wire can ensure the normal operation of the magnetic reading head, and the grounding impedance must meet the specifications (grounding resistance ≤ 4 ohms);

4. 有些情况下为了减小干扰，推荐使用EMC滤波器；

4. In some cases, EMC filter is recommended to reduce interference;