
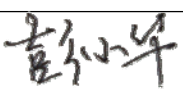
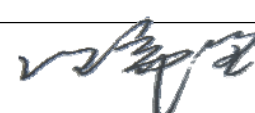


金龙机电股份有限公司
JINLONG MACHINERY & ELECTRONICS CO., LTD.
 www.jinlong-machinery.com
 sales@jinlong-machinery.com

规格书

SPECIFICATION

| | | |
|----------------------------------|---|--|
| 客户信息/ Customer Information | 客户名称/Customer | |
| | 客户料号/Part No. | |
| | 客户承认签章 Customer Approved Signatures | |

| | | |
|---|---|---|
| 文件编号/Spec No. | KOTL-B-031 | |
| 品名/Description | 圆柱直流马达/Cylindrical DC motor | |
| 型号/Part No. | Z6SCAB0061141 | |
| 设计/Designed | 审核/Checked | 批准/Approved |
|  |  |  |
| 2011.03.16 | 2011.03.16 | 2011.03.16 |

规格书内容/Contents

| | |
|--|-----|
| 1、适用范围/ General Scope | 3/9 |
| 2、使用条件/ Operating Conditions | 3/9 |
| 3、测定条件/ Measuring Conditions | 3/9 |
| 4、机械要求/ Mechanical Specifications | 3/9 |
| 5、性能特征/Performance and characteristics | 4/9 |
| 6、可靠性/Reliability | 5/9 |
| 7、要求/Requirements | 6/9 |
| 8、使用时注意事项/ attentions | 6/9 |
| 9、包装/Packaging | 7/9 |
| 10、外形图/Outline Drawing | 8/9 |
| 11、修改记录 / REVISION HISTORY | 9/9 |

| | |
|--------------|---------------|
| 型号/ Part No. | Z6SCAB0061141 |
|--------------|---------------|

1. 适用范围/ General Scope
 本说明书适用于圆筒式永磁直流电机 Z6SCAB0061141 型
 This specification applies to cylindrical permanent-magnetic motors DC model
 Z6SCAB0061141

2. 使用条件/ Operating Conditions

| 项目/Item | | 规格/Specifications | 条件·备注/Conditions & Remarks |
|---------|-------------------------------|---|--|
| 2-1 | 额定电压 Rated voltage | 3.0V DC | |
| 2-2 | 额定负荷 Rated load | 振子 Counterweight | 见 10. 外形图 As specified in 10. Outline Drawing |
| 2-3 | 旋转方向 Rotation | C.W/C.C.W (clockwise or counter clockwise) | |
| 2-4 | 马达位置 Motor position | 全方位 All position | |
| 2-5 | 使用电压范围 Operating voltage | 2.2~3.6V DC | |
| 2-6 | 使用环境 Operating environment | -30 ~ 70℃, 常湿 /Ordinary Humidity:65±20%RH | 无水气凝结 No condensation of moisture |
| 2-7 | 保存环境 Storage environment | -40 ~ 80℃, 常湿 /Ordinary Humidity:65±20%RH | 无水气凝结 No condensation of moisture |

3. 测定条件/Measuring condition

| 项目/Item | | 规格/Specifications | 条件·备注/Conditions & Remarks |
|---------|----------------------|--------------------------------|--|
| 3-1 | 温度 Temperature | 20±2℃ | |
| 3-2 | 湿度 Humidity | (63%~67%) RH | |
| 3-3 | 位置 Motor position | 轴向水平 Motor shaft horizontal | 将马达固定在试验台上 Lock the motor in a test fixture |

标准测试条件为温度 20℃, 湿度 65%。如无疑异, 也可在温度 5~35℃、湿度 45~85% 的条件下测试。马达测试时, 放置方向为轴向水平。/The measurement at 20℃ & 65%RH is standard. If the judgment is not questionable, recognize measurement at 5℃ to 35℃ & relative humidity 45% to 85%. Direction of motor is shaft horizontal.

4. 机械要求/ Mechanical specification

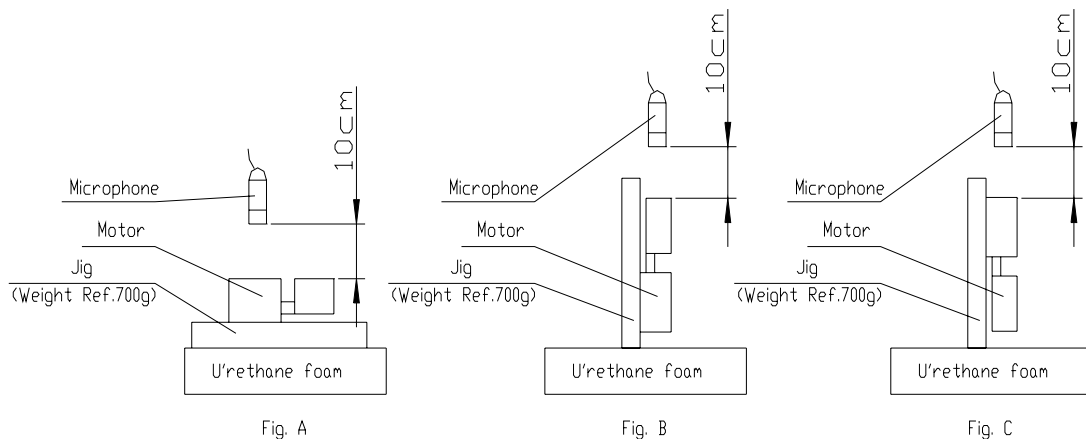
| 项目/Item | | 规格/Specifications | 条件·备注/Conditions & Remarks |
|---------|--|---|--|
| 4-1 | 结构 Configuration | 见 10. 外形图 As specified in 10. Outline Drawing | Outline drawing No: Z6SCAB0061141 |
| 4-2 | 外观 Appearance | 不含有机械损坏及不适当的浸蚀等。 There shall be no evidence of mechanical damage and shall not have inadequate corrosion and so on | 目测 (容许范围根据样品外形) Visual examination(allowable extent is based on boundary sample) |
| 4-3 | 轴向间隙 Shaft end play | 0.1mm~0.3mm | |
| 4-4 | 振子固定力 Holding strength of vibration weight | 49N (5kgf) Min | |

5.性能特征/Performance and characteristics

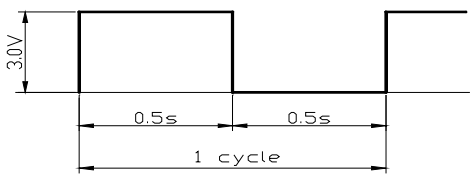
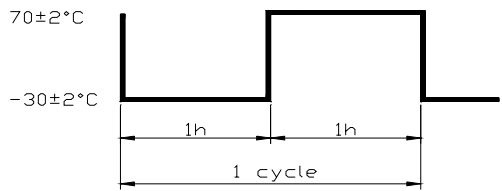
| 项目/Item | 规格/Specifications | 条件·备注/Conditions & Remarks |
|--------------------------------------|-------------------|--|
| 5-1 额定转速 Rated speed | 10000±2000rpm | 在额定电压和额定负载（振子）下。 At rated voltage and rated load (vibration weight). |
| 5-2 额定电流 Rated current | 70 mA Max | |
| 5-3 堵转电流 Stall current | 105 mA Max | 在额定电压下 At rated voltage |
| 5-4 起动电压 Starting voltage | 1.7V DC Max | 在额定负载（振子）下电枢的任意位置。 At rated load (Counterweight) any position of rotor. |
| 5-5 绝缘电阻 Insulation resistance | 1MΩ Min | 在 100V 直流下，端子和机壳间 At DC 100V between Terminal and case. |
| 5-6 端子阻抗 Terminal resistance | 35 Ω (±20%) | 在 20℃ 下 At 20℃ |
| 5-7 机械噪音 Mechanical noise | 50db(A) Max | |

在额定电压、额定负载（振子）下
背景噪音：不大于 28dB.A 计权
测试仪器：B&k
夹具重量：700g
At rated voltage and rated load (Counterweight).
Back ground noise 28dB(A) Max
Measuring instruments: B&k
Weight of jig:700g

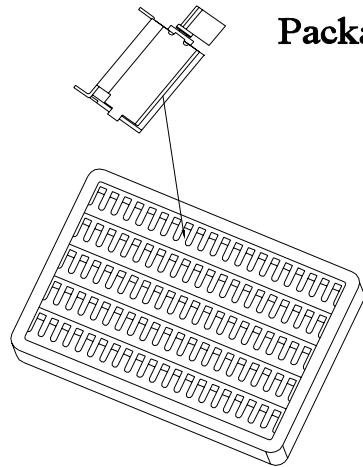
5-7



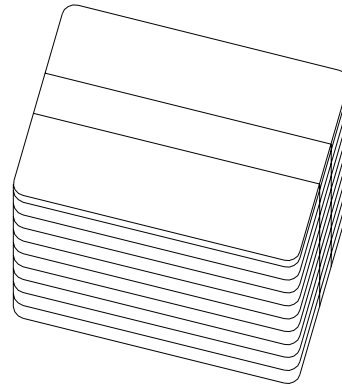
6. 可靠性/Reliability

| 项目/Item | 规格/Specification | 判定标准/Judgment | | | | | | | | | | | | |
|------------------------------------|---|--|----------------|------------|-------------------|------------|------------|------------|----------------|-------------|--------------|------|-----|-------------------|
| 6-1 寿命 Life time |  | <p>在常温常湿下放置 2h 后，马达应符合项 7-1 的要求。 After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-1.</p> | | | | | | | | | | | | |
| | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">位置 Position</td> <td style="width:10%;">电压 Volt</td> <td style="width:10%;">负荷 Load</td> <td style="width:10%;">温度 Temp</td> <td style="width:10%;">湿度 Humi</td> <td style="width:10%;">寿命 Life</td> </tr> <tr> <td>轴水平 Horizon</td> <td>Rated 额定</td> <td>Weight 振子</td> <td>20°C</td> <td>65%</td> <td>200,000 Cycles</td> </tr> </table> | | 位置 Position | 电压 Volt | 负荷 Load | 温度 Temp | 湿度 Humi | 寿命 Life | 轴水平 Horizon | Rated 额定 | Weight 振子 | 20°C | 65% | 200,000 Cycles |
| | 位置 Position | | 电压 Volt | 负荷 Load | 温度 Temp | 湿度 Humi | 寿命 Life | | | | | | | |
| 轴水平 Horizon | Rated 额定 | Weight 振子 | 20°C | 65% | 200,000 Cycles | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 6-2 低温放置 Low temp exposure | 温度 /Temperature: $-40\pm 2^{\circ}\text{C}$ 时间 /Time: 96h | <p>在常温常湿下放置 2h 后，马达应符合项 7-2 的要求。 After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.</p> | | | | | | | | | | | | |
| 6-3 高温放置 High temp. Exposure | 温度 /Temperature: $60\pm 2^{\circ}\text{C}$ 时间 /Time: 96h | | | | | | | | | | | | | |
| 6-4 湿度放置 Humidity exposure | 温度 /Temperature: $40\pm 2^{\circ}\text{C}$ 湿度 /Humidity: 90~95%RH 放置时间 /Exposure time: 96h 无水气凝结/No condensation of moisture | | | | | | | | | | | | | |
| 6-5 振动 Vibration | 频率 /Frequency: 10~55~10Hz 全振幅 /Displacement: 1.5mm (p-p) 加速度 /Acceleration: 22m/s^2 周期 /Period: 20min 完成 10~55~10Hz /20 Minutes log sweep 10~55~10Hz 方向 /Direction: x, y, z 时间 /Time: 每个方向 2h /Each 2 hours | <p>测试结果应符合项 7-2 的要求。 After the test motors shall be approved as specified in item 7-2.</p> | | | | | | | | | | | | |
| 6-6 自然跌落 Free fall | 试验状态/Test state:将马达固定在约 75 克（包括马达本身）的物体上，落向水泥地面。 Set the motor to the approximately 75g (include the motor) weight of block drop the motor on the concrete floor. 高度 /Height: 1.5m 方向 /Direction: 6 个面 / 6 faces 次数 /Number of times: 每个面 2 次 / Twice 2 each | <p>测试结果应符合项 7-2 的要求。 After the test motors shall be approved as specified in item 7-2.</p> | | | | | | | | | | | | |
| 6-7 热冲击 Heat shock test | 试验循环 /Test cycle :20 cycles <div style="text-align: center;">  </div> | <p>在常温常湿下放置 2h 后，马达应符合项 7-2 的要求。 After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.</p> | | | | | | | | | | | | |

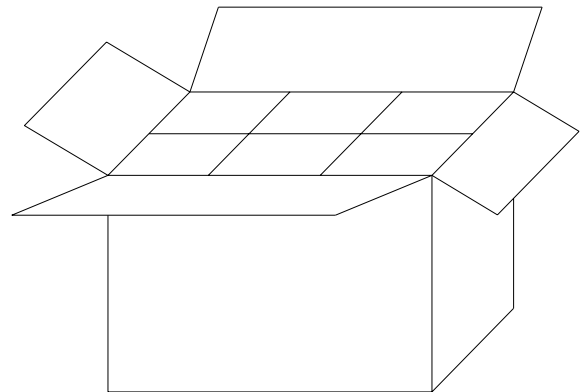
(Z6S) 圆柱马达包装 Packaging drawing of Z6S cylindrical motor



100PCS (1 tray) × 10



1000PCS (1 bundle) × 6



包装试验要求

1. 标准

- (1) 整箱重量小于等于9kg的, 跌落高度设定为75cm.
- (2) 整箱重量大于9kg但小于等于23kg的, 跌落高度设定为60cm.

2. 试验方法:

跌落要求为六面三棱一角.

- (1) 六面: 先从最大两面跌, 然后是中间大小的两面, 最后跌最小的两面, 一共六次.
- (2) 三棱: 指任选三条同一角的棱, 跌落秩序: 最长棱, 中间长度, 最短的, 一共三次.
- (3) 一角: 指上一步三条棱所组成的角, 跌落一次.

3. 判定基准

经过跌落试验后, 产品外观、性能无不良.

Package Test Requirement:

1. Criteria

- (1) The weight of the whole carton less than 9kg, the dropping height is 75cm.
- (2) The weight of the whole carton more than 9kg and less than 23kg, the dropping height is 60cm.

2. Test Methods:

Dropping requirement is 6 faces, 3 arris, 1 angle.

- (1) 6 faces: First dropping with two biggest faces, then dropping with another two middle faces, at last dropping with two smallest faces, once per face, total 6 faces.
- (2) 3 arris: Choose any 3 arris which make up of the same the angle, the dropping sequence is the longest arris, middle arris, shortest arris. Total 3 times.
- (3) 1 angle: Point to the angle which is made up with the 3 arris in the above step. Dropping for 1 time.

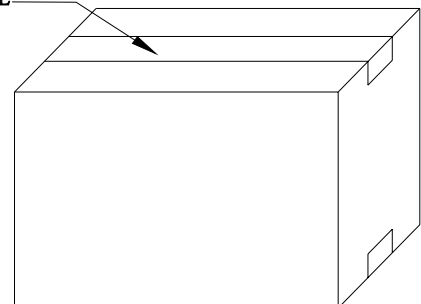
3. Judgement Criterion

After drop test, no evidence of damage on the appearance and performance.

Remarks:

- 1000PCS/CTN: 24cm × 17.5cm × 27.5cm
 2000PCS/CTN: 34cm × 24cm × 27.5cm
 4000PCS/CTN: 47cm × 34cm × 27.5cm
 6000PCS/CTN: 54cm × 47cm × 27.5cm

OPP TAPE



10. 外形图/Outline Drawing

www.jinlong-machinery.com

Z6SCAB0061141

技术要求/Technic requirement

1. 额定电压/Rated voltage: 3.0V
2. 额定电流/Rated current: 70mA Max
3. 额定转速/Rated speed: 10000 ± 2000rpm
4. 堵转电流/Stall current: 105mA Max
5. 端子阻抗/Terminal resistance: 35Ω (± 20%)
6. 起动电压/Starting voltage: 1.7V Max
7. 轴向间隙/Shaft end play: 0.1~0.3mm
8. 所有尺寸为A向压紧后的尺寸(不包括轴向间隙)/Overall length is measured after counterweight being pressed against body in direction A. (Shaft end play is not included.)
9. 未注线性公差为/Unmarked tolerance: ± 0.1mm

| | | | | | | | | | |
|--|--|--|--|--|--|-----------------------|--|-----|---------------|
| | | | | | | 金龙机电股份有限公司 | | | |
| | | | | | | jinlong-machinery.com | | | |
| | | | | | | 外形图 | | | |
| | | | | | | 阶段标记 | | 重量 | 比例 |
| | | | | | | | | 5:1 | Z6SCAB0061141 |
| | | | | | | 共 页 | | 第 页 | |

2011. 03. 16 说明书/Specification 编号/NO. K0TL-B-031 代码/code: 0 8/9

| |
|----------|
| 借(通)用件登记 |
| 底图总号 |
| 签字 |
| 日期 |

| 标记 | 处数 | 分区 | 更改文件号 | 签名 | 日期 |
|----|-----|--------------|-------|-----|--------------|
| 设计 | 郭梦秋 | 2011. 03. 16 | 标准化 | | |
| 校对 | 杨兰 | 2011. 03. 16 | | | |
| 审核 | 彭小华 | 2011. 03. 16 | | | |
| 工艺 | | | 批准 | 项瑞坚 | 2011. 03. 16 |

