

客户/CUSTOMER:

版本/REV.NO: 1.0

产品规格书/ SPECIFICATION

产品名称/ ITEM: 齿轮减速直流电机/ DC GEAR MOTOR

产品型号/ MODEL: GHM1770010033EF

客户确认/CUSTOMER SIGNATURE:

批准 APPROVED	审核 CHECKED	编制 WREITTEN
		

深圳市仓兴达科技有限公司

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1. 适用范围/ General

本规格书适用于 GHM1770010033EF 型齿轮减速直流电机

This specification applies to GHM1770010033EF DC gear motor

2. 基本规格/ Basic specification

- (1) 外形尺寸/ Configuration: 见后第 7 项外观图/ As specified in outline drawing at clause 7.
- (2) 重量/ Weight: $2.2 \pm 0.5\text{g}$
- (3) 减速比/ Gear ratio : $1/25$

3. 使用条件/ Operating condition

- | | |
|-------------------------------------|--------------------|
| (1) 使用姿势/ Motor Position | 全方向 /Any positions |
| (2) 额定电压/ Rated Voltage | DC 3.0 V |
| (3) 使用电压范围/ Operating voltage range | DC 2.0V~4.0V |
| (4) 旋转方向/ Rotation | CW |
| (5) 额定负荷/ Rated load | 0.2 mN.m (2g.cm) |
| (6) 使用温度范围/ Operating Temperature | -10 ~60 °C |
| (7) 贮存温度范围/ Storage Temperature | -20 ~70 °C |
| (8) 贮存湿度范围/ Storage Humidity | ≤80 %RH (≤40 °C) |
| (9) 堵转使用/ Stall time | ≤5 sec |

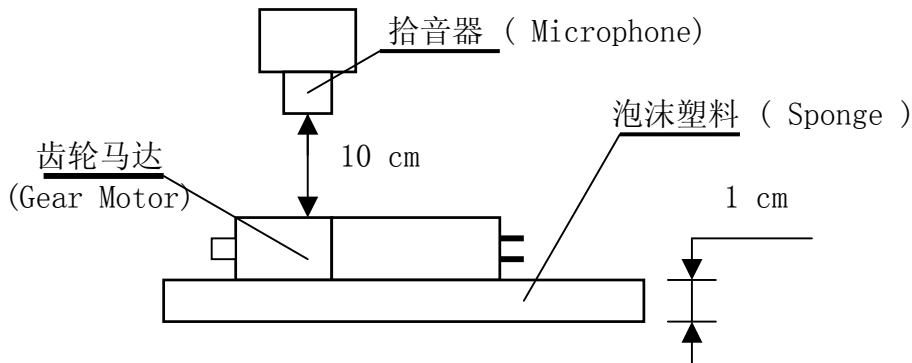
4. 规格/ Characteristics

4-1 基本特性/ **Characteristics:** (额定电压 3.0V 时)/ (At Rated Voltage 3.0V)

- (1) 无负荷特性/ No load characteristics:无负荷电流/ No load current $\leq 110\text{ mA}$
无负荷转速/ No load speed $970^{+200}_{-100}\text{ rpm}$
- (2) 额定负荷特性/ Rated characteristics:额定负荷电流/ Rated current $\leq 150\text{ mA}$
额定负荷转速/ Rated speed $900^{+180}_{-100}\text{ rpm}$
- (3) 起动转矩/ Starting torque: $20.6\text{ mN.m Min (21gf.cm Min) , 0-2g.cm 两点法计算/ Calculate with 0 \& 2g.cm two point.}$
- (4) 无负荷起动电压/No load starting voltage: $\leq \text{DC } 2.0\text{V}$
- (5) 堵转电流/ Stall current: $\leq 0.35\text{A}$
- (6) 组件强度/Parts strength: 电压为使用电压范围之最大值, 出力轴堵转(LOCK), 组件无破损 Parts have no damage at Operating voltage and shaft locked.
- (7) 机械噪音/Mechanical Noise: $\leq 55\text{ db}$ (暗噪音/Back ground noise $\leq 35\text{ db}$)

测试方法如下/ Test method : 在无负荷状态施加额定电压运转, 接下图规定测定

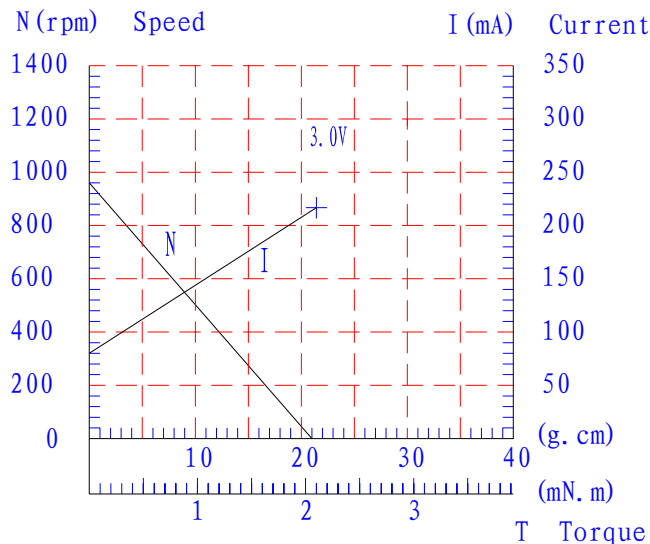
No load at Rated Voltage.



4-2 标准测试条件/ Standard test condition

- (1) 测定方式/ Motor Position: 出力轴水平状态/ Shaft horizontal
- (2) 旋转方向/ Rotation: 从出力轴方向看为 CW/ CW (As seen from shaft)
- (3) 电源/ Power: 直流稳压电源/ DC Power supply
- (4) 测试环境/ Measuring environment: 通常在 5 ~ 35°C、相对 30~90%RH 情况下进行, 有疑意时, 在 20±5°C、60±10 %RH 条件下测试/ All data are based on the measurement under the temperature of 20±5 °C and humidity 60±10 % RH. however, the ranges of temperature 5~35°C and humidity 30~90% RH are to be applicable as long as no problems.

4-3 参考特性/ Characteristics Curve



5. 信赖性/ Reliability

5-1 环境试验/ Environment tests

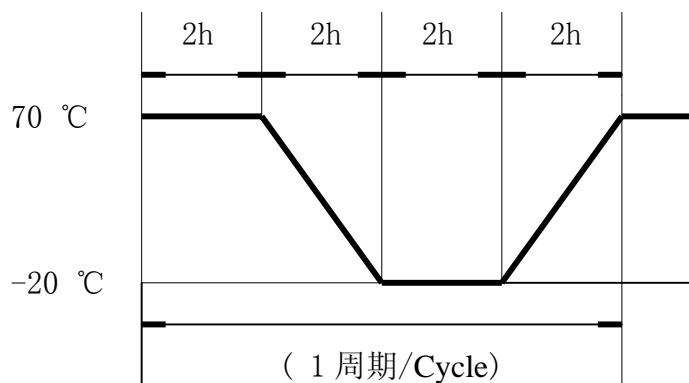
经下述试验后基本特性之(1)、(2)、(3)的测定结果变化不大于±30 %。

After the environment test, motors shall be approved as initial date ± 30% for (1)、(2)、(3) of 4-1 Characteristics

- (1) 环境贮存试验：在贮存温度范围之最大、最小条件下贮存 24h，常温放置 24h 后测定。

Environment storage test: Exposure to the limited storage temperature for 24 hours, Later on exposure in ordinary temperature and humidity for 24 hours and then measure.

- (2) 温度循环试验/ Heat cycle test



在上述条件经 6 个周期试验后，在标准试验条件下放置 8h 后测定。

During 6 cycle and then exposure in ordinary temperature and humidity environment for 8 hours and then measure

- (3) 高温高湿试验：在 40°C、90 %RH 条件下放置 48 h 后，在常温常湿放置 4 h 测定。

Temperature & Humidity test: Exposure to 40°C、90 %RH for 48 hours, Later on exposure in ordinary temperature and humidity for 4 hours and then measure.

- (4) 落下试验：产品在出荷包装状态距混凝土地面高度为 75 cm 处自然落下。6 个面各作一次共 6 次。

Free fall test: Set the motors in the carton; Drop the motors with carton on the concrete floor from 75cm in height. Drop once in each of the six perpendicular plants, totally 6 times.

6. 注意事项/ Cautions

- 6-1 在允许的电压使用范围内使用。

Pay attention to the allowable operating voltage range and load for use.

- 6-2 在输出轴部不可施加过大的外力，避免减速器内部受损。

Don't press the shaft with a excessive force to avoid any damage to the gear body.

- 6-3 焊接：焊接应在 1-2 秒内完成，以免损坏电机端子或导线。

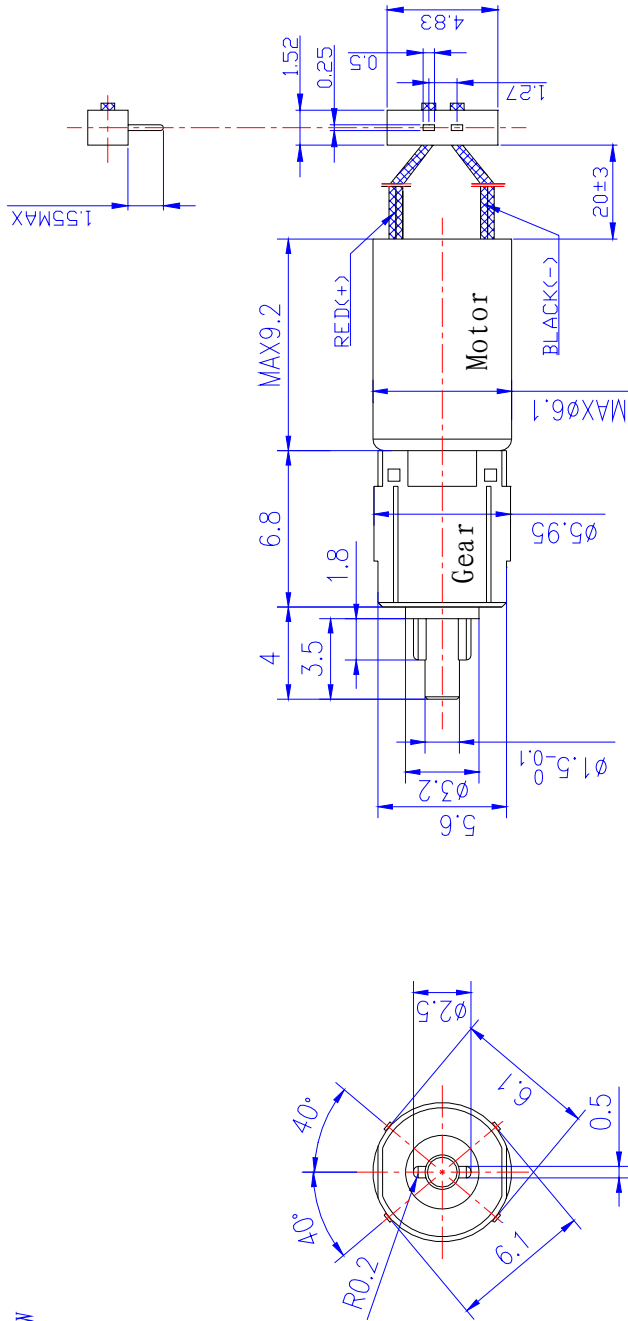
To avoid damage to the terminal and motor, soldering time should be completed within 1-2 seconds. .

- 6-4 储存：应避免存放在高温、高湿或腐蚀性气体的环境中。

Avoid storing in high temperature, high humidity and corrosive gas environment.

7. 外观图/ Outline drawing

单位/UNIT: MM
 旋转方向/ROTATION:
 顺时针/CW



未注公差/Tolerance of no-indication: ± 0.2mm

PART NAME	MATERIAL	SYM	REVISION	DATE	APPROVED
PART NUMBER	SCALE	5:1		2007/4/28	IN CHARGE
ANGLE					DESIGNED
					DRAWN

