

Dongguan Country Dream Motor Co.,Ltd.

东莞市国梦电机有限公司

Zhantuo Technology Zone, Ludong Precinct, Humen Town, Dongguan City, Guangdong Province 523898, P.R.China

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样 品 承 认 书

Specification for Approval

客户名称:

Customer

添可智能科技有限公司

版 本:

REV.

A

发放日期:

Issuance Date

2024-3-4

客户零件编号:

Customer Part No.

马达型号:

Model No.

BL2832I

办单编号:

SSO#

CDMS

更改原因:

Reasons of Changed

首版发行

电机工程师 Motor Engineer	电子工程师 Electronics Engineer	工程审核 Engineer Reviewed	工程核准 Engineer Approved
客户确认 Approved by Customer			

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变更记录表 REVISIONS

日期 Date	页码 Page	变更前 Before	变更后 After	更改人 Signed	批准人 Checked

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一、应用(APPLICATION)

This specification shall be applied to the CDM motor model BL2832I.

本规格书适用于国梦电机型号 BL2832I。

二、规格(GENERAL SPECIFICATION)

No.	项目(ITEM)	规格(SPECIFICATION)	备注(REMARKS)
1	标准电压 Stand voltage	DC 24V	Voltage Range 12-24V DC
2	类型 Motor type	3 相 6 极 3 phases 6 poles	
3	定子槽数 Number of stator slot	9 Slots	
4	定子线圈连接类型 Stator winding	Y connection	
5	线圈电阻 Coil resistance	TBD	
6	线圈电感 Coil inductance	TBD	
6	旋转方向 Direction of rotation	CW/CCW	从输出轴端看 CW/CCW when See output shaft side
7	使用环境温度范围 Operating temperature	-10℃~+40℃	
8	电机保存温度范围 Reservation temperature	-30℃~+70℃	
9	湿度 Ambient humidity	RH 90% max	电机及包装上无水露 No water exists during storage
10	电机安装方式 Motor installation	电机转轴竖直放置 Motor shaft vertical	

三、电机特性: (MOTOR CHARACTERISTIC)

电机工作电压 Voltage(Motor)		Vm=24V DC	测试方法 Test method	AQL%
驱动方式 Driving Method		3 phase full wave rectified		
1	空载电流（A） No load current(A)	0.15A Max	功率分析仪 Power analyzer	1.0
2	空载转速（rpm） No load speed (rpm)	6000 RPM±10%	转速灯 Stroboscope	1.0
3	负载电流(A) Rated load current (A)	0.17A ±0.03A	功率分析仪 Power analyzer	1.0
4	额定转速（rpm） Rated load speed (rpm)	5600 RPM±10%	转速灯 Stroboscope	1.0

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5	额定力矩 Rated torque	5mN.m	功率分析仪 Power analyzer	1.0
6	马达性能曲线 Motor characteristic curve:	看马达特性曲线图 See motor performance curves characteristics		
7	噪音 Noise	55dB(A) Max DC[24V],空载运行, 30cm 距离测试 DC[24V], Free air, Distance 30cm, With no load	噪音测试仪 Sound level meter	1.0
		<p>Micro phone 噪音计测试头</p> <p>Motor 电机</p> <p>Sponge 海绵</p>		
8	耐压强度 Insulation strength	350V AC for 1 Seconds, 定子漏电流, 3 毫安最大 Leakage current 3mA Max on the stator	高压测试仪 Withstanding voltage tester	1.0
9	Insulation Resistance 绝缘电阻	DC 500V, 10[M Ohm] Min DC 500V 10兆欧最小	Check between all shorted terminals and motor cover	
10	绝缘耐热 Insulation level	Class B		
11	寿命时间 Life time	Continuous operating test, No load 8000 hrs Min. 空载连续运行, 8000小时最小	No load Rated voltage Normal temperature 20 ±5[°C] 常温 20±5[°C]	
12	电流限制 Current limit	1A Ref.	功率分析仪 Power analyzer	1.0

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13	锁定保护 Motor lock protection	<p>tLD=2±1 (SEC)</p> <p>当电机锁定时间超过tLD 时，驱动芯片停止运行。</p> <p>只能通过下列行为，可以重新启动。</p> <p>1、 电源重新上电；</p> <p>2、 PWM 关闭再重新打开；</p> <p>When the motor locks and time over tLD, the motor driver will stop. Restart it only by following actions:</p> <p>1. Power off and power on again.</p> <p>2.Cut off PWM and re-enable PWM.</p>		
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四. 电机端口：（MOTOR TERMINATIONS）

NO.	信号 SIGNAL	I/O	规格 SPECIFICATIONS	备注 NOTE
1	VCC (Red Wire)	IN	DC 24V	电源正 POWER
2	GND (Black Wire)	OUT	GROUND	电源负 GROUND

五. 特性测定条件及方法(TEST METHOD)

1.通常在温度为 25℃，相对湿度为 65%的条件测试，在温度为 5℃~35℃和相对湿度为 45%~85%时也视为正常的测试环境；

Temperature 25℃,Relative humidity 65% as standard. However a range of 5℃~35℃ and humidity of 45%~85% can be viewed as normal test conditions.

2.测试方法 Test Method

额定电流、转速、功率，须在额定电压下，运行 1 分钟取数。

Observe rated current . rated speed and rated input power after operating for 1 min.

3.噪音 Noise

无负荷运行(Duty 100%): 把马达放在厚 30mm 泡沫（海棉）板上，马达轴芯水平位置放置，噪音计距马达外周 30cm，环境噪音 36 dB Ref.。

No load operation: Placed the motor on a sponge cushion of thickness 30mm and the shaft should be positioned horizontally , the microphone position is 30cm from motor , Background noise 36 dB Reference.

六. 包装(PACKING)

根据适当的尺寸标准在一个标准纸箱中装108个产品。

One standard carton contains 108 pcs products according to appropriate size criterion.

七. 结构(STRUCTURE)

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1. 外形尺寸：参看外形图(BL2832I-004)

Dimension: Please see the outline Drawing (BL2832I)

2. 马达重量：约 60 克/台

Weight: about 60g/unit

八. ROHS

马达符合 ROHS 指令

Motor Conform to Directive 2015/863/EU(ROHS Directive).

九. 产品安全(Product safety)

When safety of the blower fan is in question , please notify us and conduct design review.

如果对本产品的安全性有任何疑问，请务必联系敝司，敝司会进行相关的技术验证。

1. Hazardous Material 有害物质:

All material used for this product must comply with RoHS and shall be registered and/or known safety substance unless otherwise noted. Specific chemical substance should not be used.

用于本产品的所有材料必须符合RoHS 指令，而且必须是有记载的且为安全的物质，不可使用特殊的化学物质。

2. Lock Motor 回转锁定:

Neither smoke nor burning after locked rotor at rated voltage by using the standard driving circuit.

以标准驱动回路输出额定电压，在锁定转子时不可有产生烟火的情况。

3. Atmosphere 气体

For proper operation, storage environment should not contain corrosive gases including H₂S, SO₂, NO₂, Cl₂, etc.

Storage environment should not have material that may emit corrosive gases especially from organic silicon, cyanic, formalin and phenol base. In the mechanism or the set, existence of corrosive gases may cause no rotation in motor.

适当的使用和存储环境不能含有H₂S, SO₂, NO₂, Cl₂ 等腐蚀性气体，存储环境也不能有会产生有毒气体的物质，尤其是有机硅、福尔马林、酚类物质。这些腐蚀性有毒气体的存在有可能导致电机停止运转。

4. Storage 存储

Storage under above atmosphere and high temperature, high humidity should be avoided. Especially when the product need to be long period storage, please be more carefully, and storage period should be within 6 months under ordinary temperature and humidity.

应该尽量避免在上述有害气体环境、高温高湿环境中存储产品。如果需要特别的长时间存储，在正常的温度和湿度环境中存储时间不应超过6个月。

5. Overload 过载

Excessive load should not be added on the motor, otherwise the motor may be damaged. Don't use the motor under overloaded and locked condition more than 10 seconds.

不可施加过度的超载给电机，否则可能毁损电机。在超载或锁定情况下使用电机不应超过10 秒钟。

6. Static Electricity 静电:

Take anti-static electricity measuring while touching, checking and operating motor.

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在接触、检查和使用电机是需采取防静电措施。

7. For connection to power source terminal of the blower fan, please be careful not to deform the terminal
连接本产品电源端子时请注意：不要损坏端子原有形状。

8. Please connect securely following pin arrangement on drawing.
请按照图纸上规定的端子顺序进行正确的连接。

9. Never touch a rotational part with hands or fingers during applying electricity.
严禁在电机通电状态下用手或者手指触摸电机的转动部分。

10. For use of lead wires, a switch, a relay, etc., please use a compliant product to applicable standards, fully considering current amount and heat-resistance.
使用引线、开关、继电器等部品请充分考虑电气容量，耐热性等是否满足产品规格。

11. Please do not use the blower fan under an environment which moisture, water drop, dirt, dust, or others intrude into inside of the motor.
请避免在水蒸气、水滴、尘埃容易进入电机内部的环境中使用电机。

12. Please do not operate with hands wet. When moisture intrudes, fully dry the motor, and then apply electricity. Never apply electricity with moisture.
手湿时操作电机，严禁在有水分进入电机的情况下通电。如果有水分进入电机内部，请将电机充分干燥后再度通电。

13. Please do not connect reversely the lead wires of power and ground. In case that abnormality occurs, please turn off immediately.
请不要将连接线的电源端和接地端接反。如果有异常情况发生，请立刻切断电源。

14. For connecting and disconnecting the connector to the motor, be sure to turn off the power and the motor stops the rotation. If it is connected or disconnected while applying electricity or rotating, drive circuit may be broken, leading to motor rotational malfunction.
连接或断开连接本产品时，请务必切断电源。在电机完全停止运转后在进行操作。如果在通电状态或电机运行状态下操作，驱动电路可能会被损坏，可能会导致电机不转。

15. For external impact by noise, surge, instant power failure, malfunction by electrostatic, circuit breakage, or terminal noise, please confirm with your finished product. Especially for long lead wire, please confirm impact by noise, etc.
噪音、浪涌、电压跌落、静电、电路破坏以及端子部位干扰等测试，请在贵司的整机状态下进行。特别是带有长导线的部品，请确认干扰等项目。

16. If the motor is dropped or shocked equivalent to drop, please do not use the blower fan because it may cause insulation or bearing failure.
因可能产生绝缘不良，轴承不良等问题，在本产品跌落后或者受到较大的冲击后，请不要使用本产品。

17. Please do not rotate the motor with external force. It may break the motor with back EMF.
请不要使用外力去驱动电机，因为反电动势可能使电机遭到损坏。

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18. To protect burnout by excessive current, please insert a fuse to the power source line. For fusing current, please select more than start-up current.

为了防止过电流烧损马达，请在电源端加入保险丝，保险丝的切断电流请大于启动电流。

19. We can't guarantee to use over the specification range.

超长此规格范围的使用不在我们的保证范围内。

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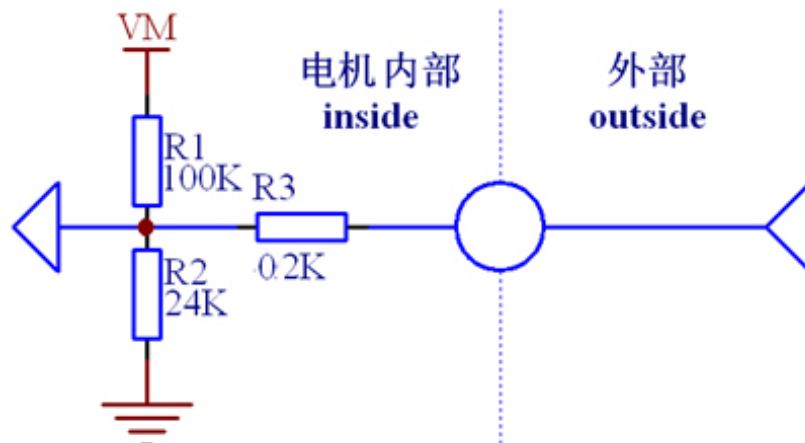
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Port Diagrams 控制端口图解

CW/CCW, FG, PWM



Motor Speed Control 电机速度控制

- PWM—脉宽控制
- Frequency 10kHz—30kHz; (TYP 20KHz)
- Duty: The working duty range at 4%~100%, if duty low than 4%, motor will be stop, if duty=100%, motor will be full speed running, PWM is Low power side is available.

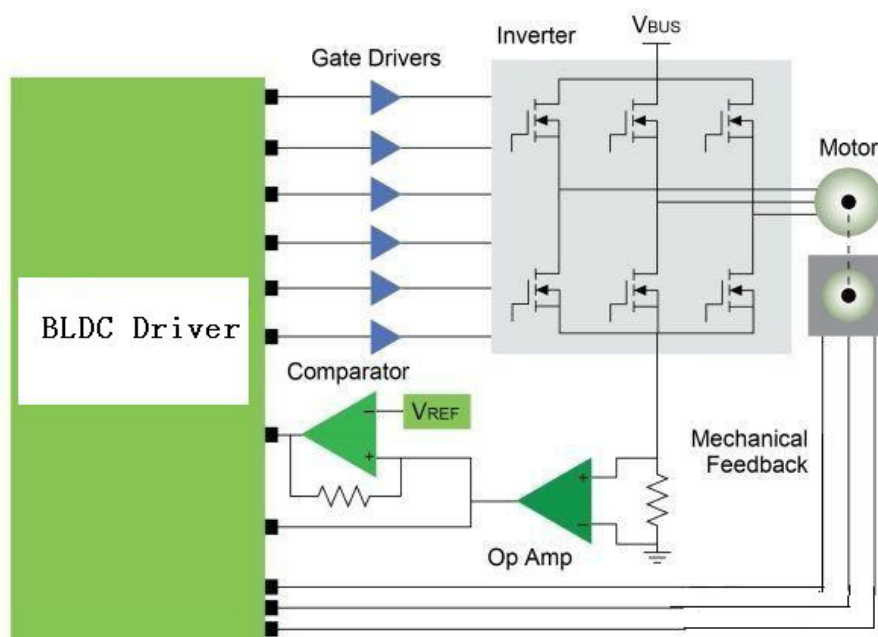
负占空比: 4%-100%调速. Duty<4%电机停转. Duty=100%时电机全速转动,

PWM 为低电平时电机全速转动。

Note: When the motor is running, if you want to reversing rotation direction, please stop motor first then set CW/CCW and restart motor

注意: 当需要切换转向时, 请先停止电机, 在切换CW/CCW 后重新启动电机.

Controller Diagrammatic Drawing 控制器示意图:

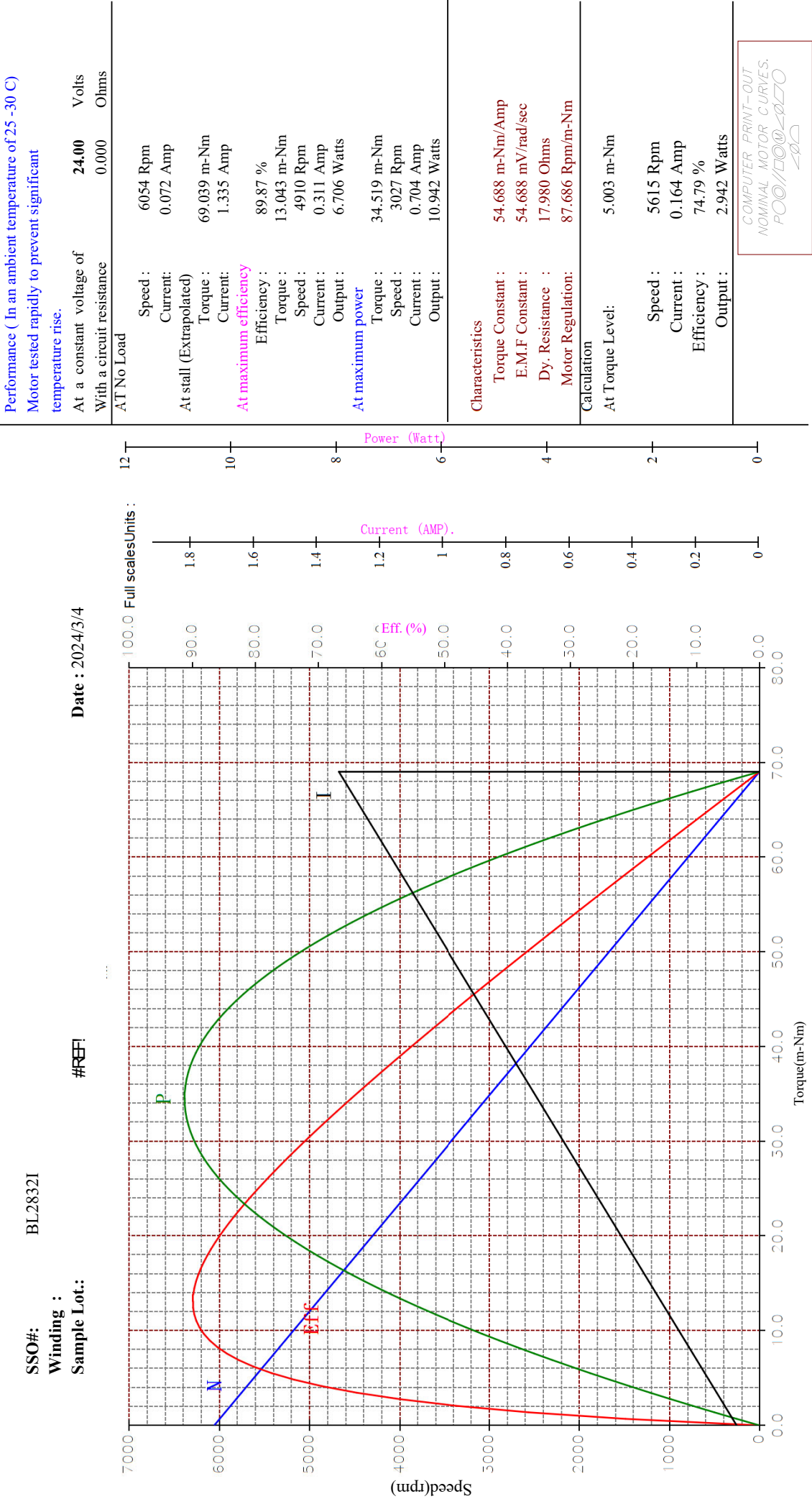




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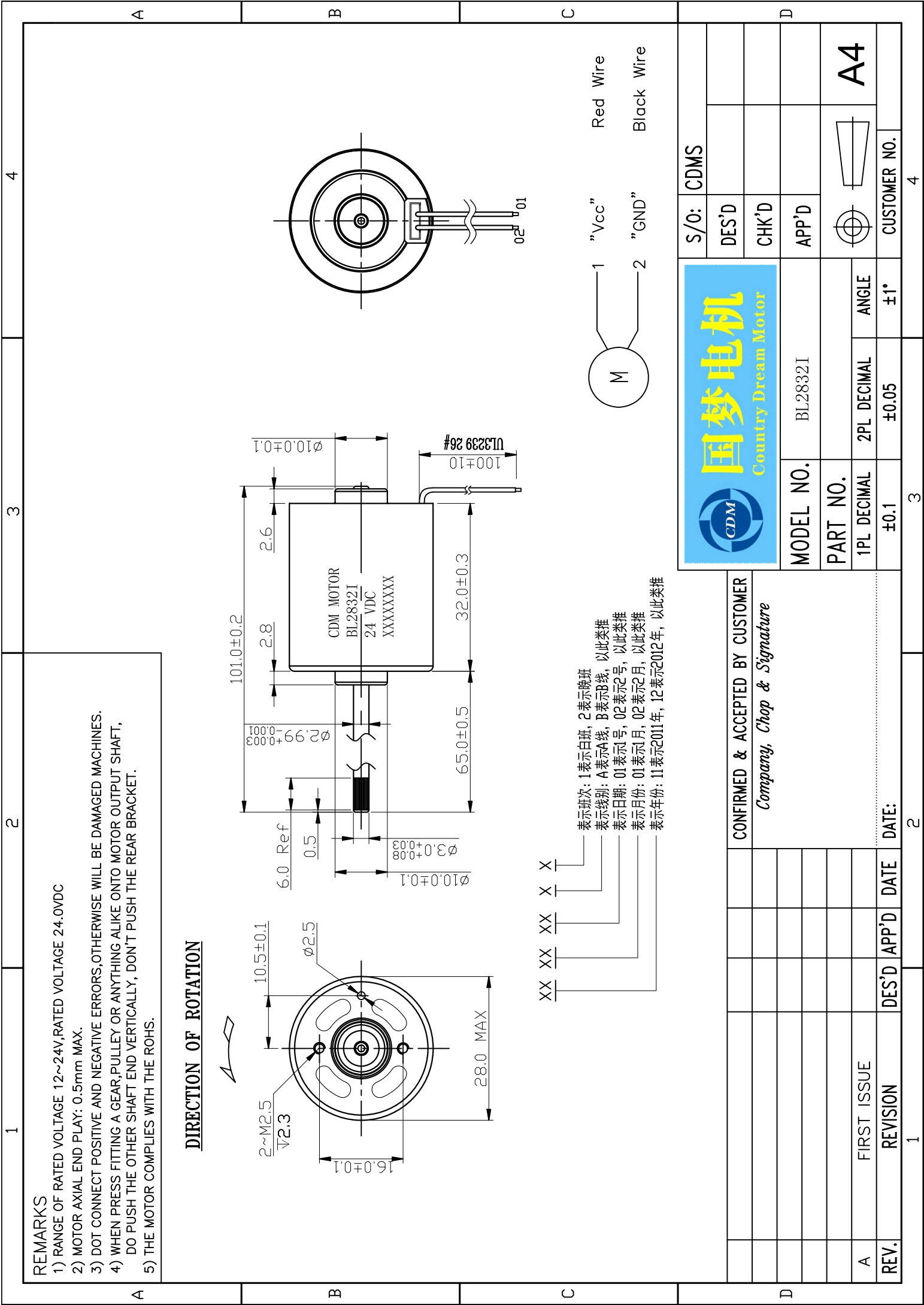
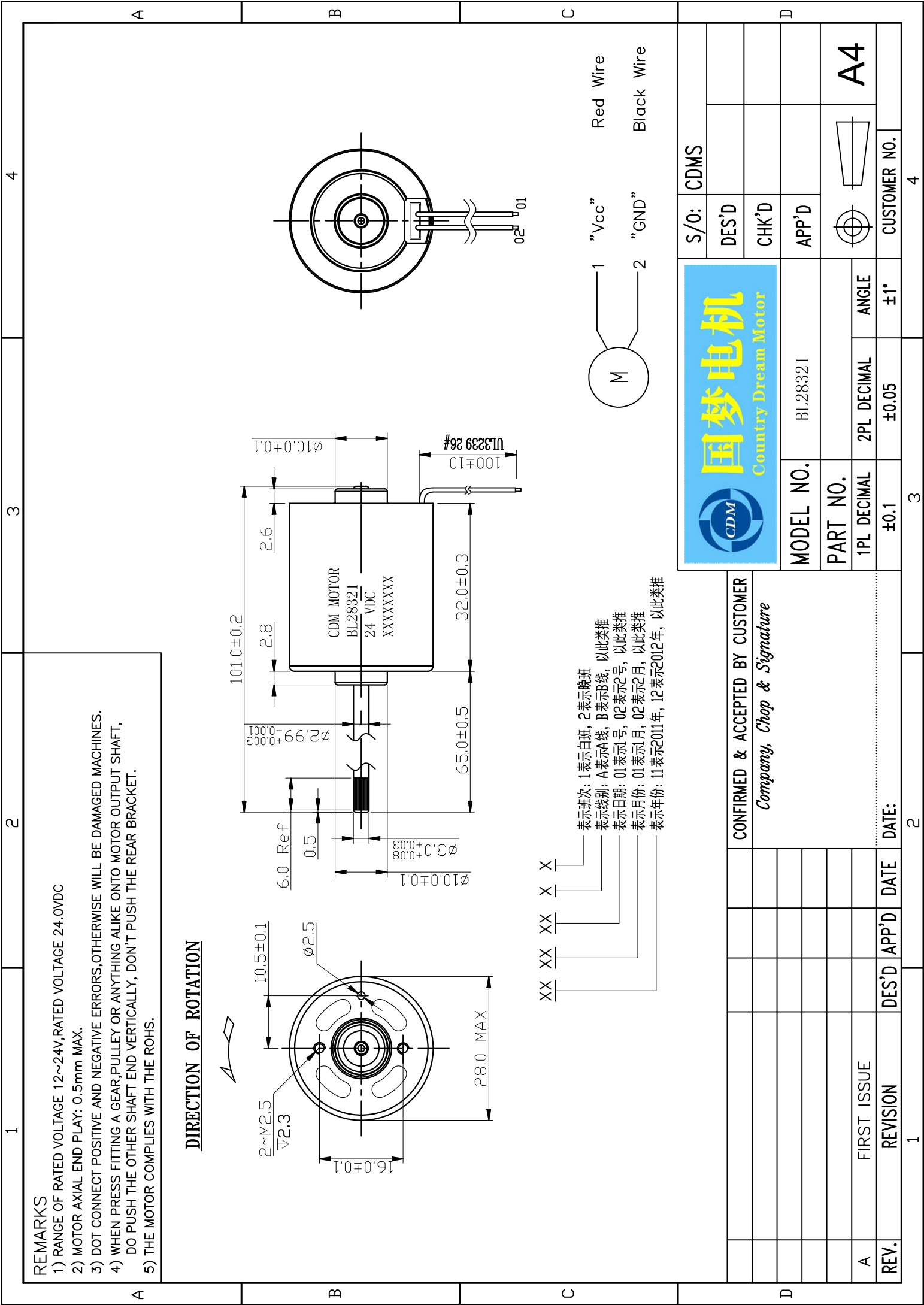
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