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JE Motor & Controller Approval Specification
产品规格书

Application/产品应用	Ventilation
JE Project Number /项目编号	22Y2051
JE PRODUCT Code/ 产品编号	1901-1130001
JE Motor Model Series	ECO-072-025

Issue No. 版本号	Revision detail 版本内容	By 修订人	Date 日期
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Table of Contents 目录

(Rev01)

Cover Sheet 封面 P1
Table of Contents 目录 P2
Fan Specification 风机规格 P3-P6
Figure 1-Nominal Fan Performance Curve 视图 1-风机 PQ 性能曲线 P4
Figure 2-Outline Drawing 视图 2-外形图 P7
Figure 3- PWM Input Circuit 视图 3-PWM 输入接线 P8
Figure 4-PWM Duty 视图 4PWM 占控比 P9
Figure 5-Noise&Vibration Test Setup 噪音振动测试方案 P10
Figure 6-Packaging Drawing/ Specification (Fan) 包装规格 P11

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JOHNSON ELECTRIC INDUSTRIAL MANUFACTORY LIMITED
FAN & CONTROLLER SPECIFICATIONS
风机产品规格书

JOHNSON PROJECT NO. 项目编号	:	22Y2051
MOTOR TYPE 马达类型	:	BLDC
FAN CODE 风机型号	:	WQ ECO 190 CB 225 072
PRODUCTION PART NO. 产品物料编码	:	1901-1130001

1. OPERATION CONDITIONS 运行条件

1.1	Voltage 电压	:	220-240 VAC
1.2	Frequency 频率	:	50Hz
1.3	Direction of rotation 转向	:	CW 顺时针 (view from output side 从风轮侧看)
1.4	Storage temperature range 存储温度	:	-40°C ~ +80°C
1.5	Storage humidity 存储湿度	:	≤95% R.H
1.6	Operational temperature range 运行温度范围	:	-25°C~ 50°C
1.7	Operational humidity/运行湿度	:	≤95% R.H
1.8	Water exposure/ 水接触	:	No direct water drip. 不能有水直接滴入

2 FAN PERFORMANCE /风机性能

2.1 Measuring condition/测试条件

2.1.1	Rated Voltage / 额定电压	:	220Vac ± 1%
2.1.2	Frequency/频率	:	50Hz
2.1.3	Install position /安装方向	:	Horizontal，Vertical upward 、Vertical downward /轴水平,轴朝上,轴朝下

2.2 Load performance (Ref.) 负载性能（参考值）

2.2.1	Loading type /负载类型	:	Fan 风扇
2.2.2	Speed range /转速	:	3300 +/- 10%rpm
2.2.3	Current / 电流	:	0.7± 10%A.

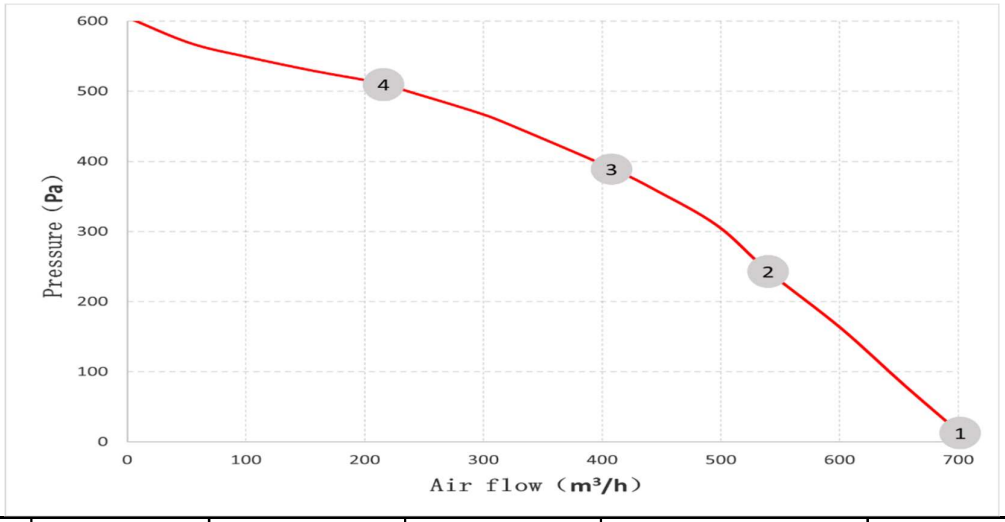
(Remark: Test on free air without inlet ring with 100% PWM (10VDC 1KHz))
(备注：不带导风圈单风机测试，100%PWM (10VDC 1KHz))

2.3 Nominal Fan performance 风机标称性能参数

2.3.1	Air flow (@0Pa)/ 0Pa 流量	:	700 + /-10% m^3/h
2.3.2	Input Power /输入功率	:	110W max.
2.3.3	PQ Curve /PQ 曲线	:	See **Figure 1** 看视图 **1**

`

Figure 1 （视图 1）
NOMINAL FAN PERFORMANC



No.	Speed/转速 (RPM)	Power/功率 (W)	Current/电流 (A)	Air flow/流量 (m^3/h)	Pressure/静压 (Pa)
1	3375	81.4	0.69	710	1
2	3323	96.0	0.79	540	243
3	3327	93.0	0.77	407	391
4	3363	81.7	0.69	208	513

3 MECHANICAL CHARACTERISTICS 机械特性

3.1 Fan Weight /风机重量 : 1.4kg (ref.参考值)
3.2 Fan Outline /风机外形图 : See **Figure 2** 请看视图 **2**
3.3 protection grade/防护等级 : IP54(Horizontal 轴水平方向)

4 ELECTRICAL PERFORMANCE/电气性能

4.1 Wiring diagram/接线图 : See **Figure 3** 请看视图 **3**
4.2 AC Input 输入电压 : 220V/50HZ
4.3 Max. Input Power/最大输入功率 : 110W
4.4 Speed control (PWM duty)/转速控制 : See **Figure 4** 请看视图 **4**
4.5 Soft Start 软启动 : Yes/ 是
4.6 Protection scheme 保护方案
Lock rotor protection /堵转保护 : Yes/ 是
Under voltage protection/低压保护 : Yes/是

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Current limit protection/限流保护 : Yes/是

5 INSULATION CHARACTERISTICS 绝缘特性

5.1 Motor insulation class 绝缘等级 : CL B
5.2 Creepage and Clearance 爬电距离与电气参数 :IEC 60335-1、GB/T 12350
5.3 Insulation material 绝缘材料
5.3.1 Basic insulation 基础绝缘 : Bobbin 线架

6 LIFE EXPECTANCY/预期寿命

The life expectancy is 40000 hours at rated voltage, ambient temperature of 40 ℃, and continuous operation (According to the actual working conditions of the product, the life expectancy will be different)。The warranty period is subject to the agreement agreed by both parties.

在额定电压、环境温度40 ℃、风机连续运转时，预期寿命为40000小时（根据实际运行工况不同，预期寿命会有不同）。保质期以双方约定的协议为准。

7 NOISE &VIBRATION /噪音&振动

7.1 Noise /噪音 : 76 +4/-6 dBA (See Figure 5) 见视图 5
7.2 Vibration/振动 : 2.0 m/s^2max.(See Figure 5) 见视图 5

8 MISCELLANEOUS

8.1 Packaging 包装 : Bulk pack with cardboard design (See Figure 6) 包装设计见视图 6

9 RoHS AND REACH CLARIFICATION 环保阐明

9.1 RoHS : This product complies to EU RoHS Directive 2011/65/EU 产品符合 RoHS 指令要求

9.2 REACH : This product compliance to REACH Directive EC No. 1907/2006 产品符合 REACH 指令要求

USEFUL HINTS ON THE BEST USE OF JOHNSON MOTORS

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关于德昌电机最佳使用的提示

Mounting our motor 马达的安装:

- Most Johnson motors provide tapped holes in the motor housing for you to use to mount your motor. Please take care not to use screws so long that they can interfere with components inside the motor frame.大多数德昌电机提供螺纹孔用来安装马达，请注意不要使用过长规格的螺钉，以免影响电机内部结构
- It is preferable not to use features on the motor such as ventilation holes and coil retainers for locating means. It is possible that these features may change as new or modified tooling is used in the future.最好不要使用电机上某些特征做为定位，例如用于定位的通风孔或线架。因为随着产品的优化，这些特征可能会发生变化。
- Enough ventilation is crucial in motor operation. It should not become blocked in your product without consultation with Johnson Electric.足够的通风散热对马达运行非常关键，在没有得得到德昌公司同意的情况下，这些通风孔不应该被堵塞。
- Do not use the winding coils of motor for mounting purpose.不得将马达的线圈用于安装用途
- If adhesives are to be used to mount your motor care must be taken to avoid any adhesive getting into the bearing areas.如果要使用粘合剂来安装马达，必须小心避免任何粘合剂进入轴承区域

Connecting our motor 连接我们的马达:

- Whatever means you are to use to connect your supply to motor. Please take care not to use so much force or heat that you cause distortion to components of motor.连接马达时，请不要因为过大的力或过热而导致电机变形

Coupling our motor 马达耦合:

- If you intend to couple a gear or a fan or some other items to motor shaft during assembly. Always remember that unusual radial and axial loads transmitted to the motor from the coupling during operation of the motor can have serious effects on the life of the bearings. If you have any concerns about this please consult with Johnson Electric.如果您打算在装配过程中将齿轮或风扇或其它部件连接到电机轴上，请始终记住，在电机运行期间，从联轴器传递到电机的超出常规的径向或轴向载荷会对轴承的寿命产生严重的影响。如果您对此有任何疑问，请咨询德昌电机。

Overloads 过载:

- Electric motors are subject very fast temperature rises under overload conditions. Take care not to apply excessive voltage to the motor or to operate it over rated load for prolonged periods without first consulting with Johnson Electric.电机在过载条件下温度上升很快。在没有事先咨询德昌电机之前，不要在过高电压或过载条件下长时间运行。

Figure 2 视图 2

FAN OUTLINE DRAWING 风机外形图

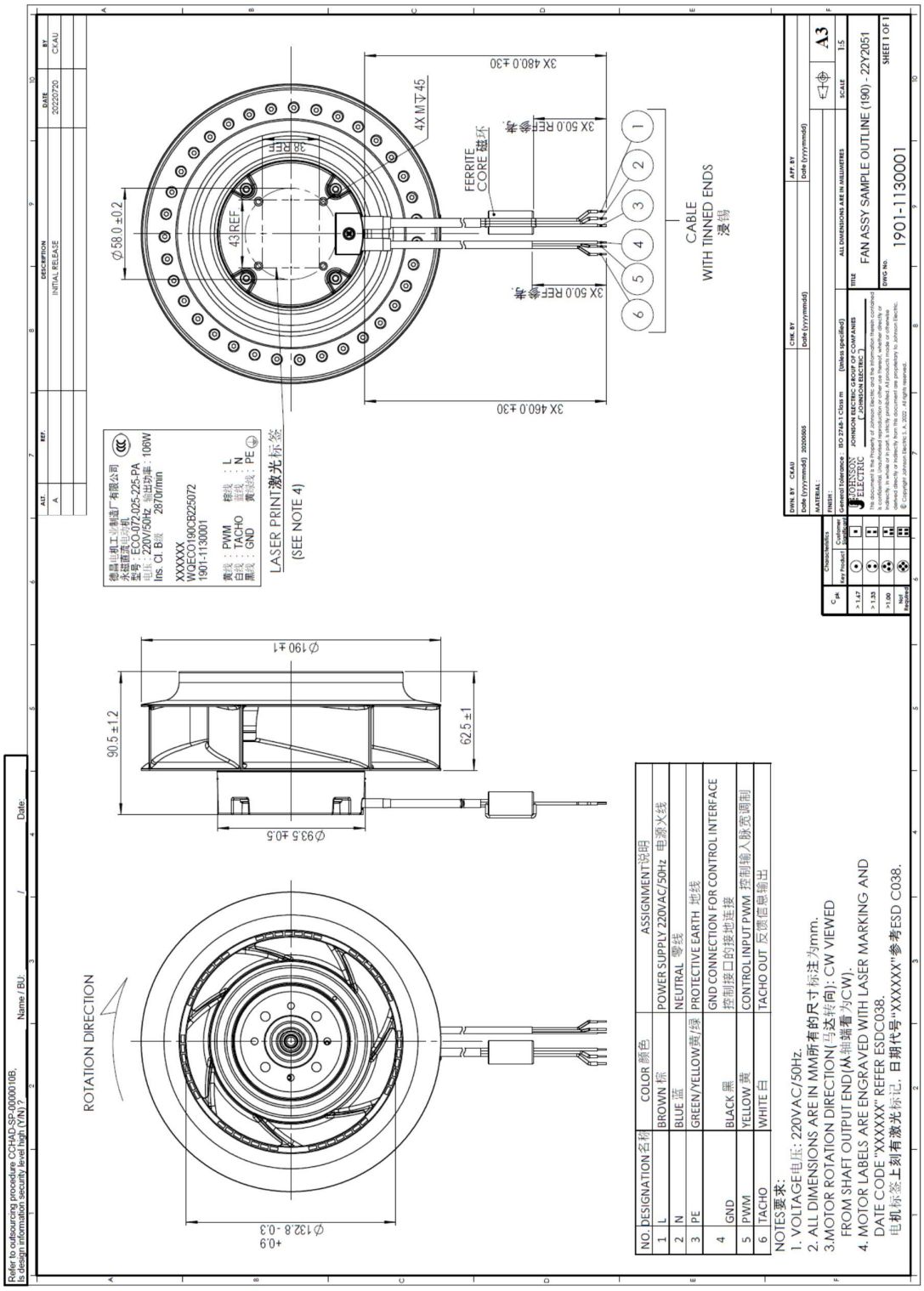
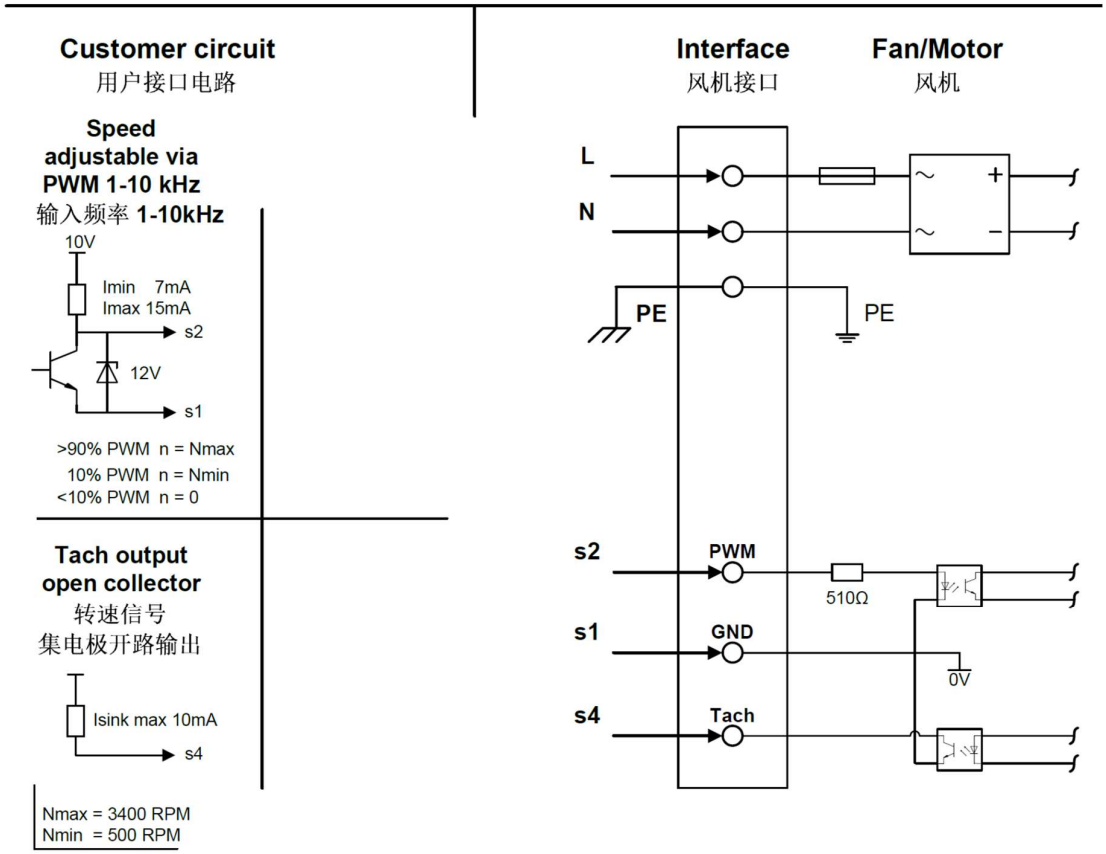


Figure 3 视图 3

PWM Input Circuit (PWM 信号输入接线图)

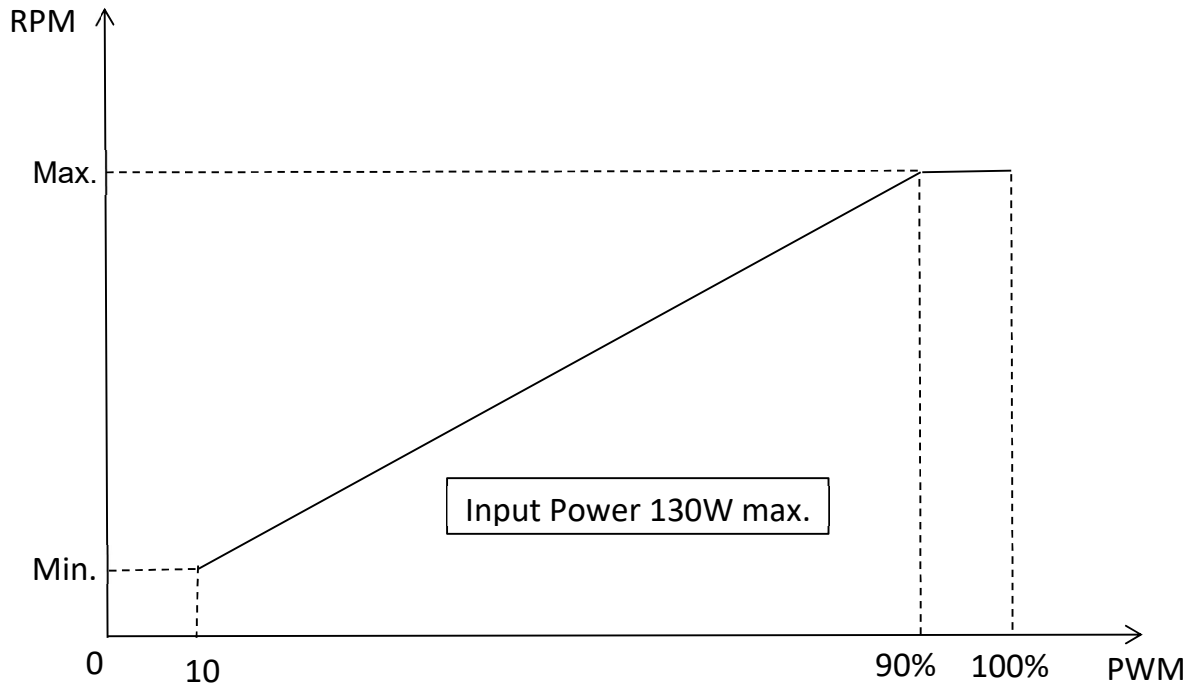


No.	Designation/名称	Color/颜色	Function/assignment功能描述
	L	blue/蓝	Supply connection, power supply, phase, see nameplate for voltage range 供电接头，电压范围参考产品铭牌
	N	brown/棕	Supply connection, power supply, neutral conductor, see nameplate for voltage range 供电接头，电压范围参考产品铭牌
	PE	yellow /green 黄/绿	Ground connection 地线
s2	PWM	yellow/黄	PWM control input, SELV 信号接头，PWM 信号输入口
s4	Tach	white/白	Tach output, open collector, 1 pulse per revolution,SELV 信号接头，转速集电极开路输出，电机每转一圈输出一个脉冲信号
s1	GND	black/黑	Reference ground for control interface, SELV 信号接头，参考地

Diagonose 诊断信息

Thredshold /阈值	Protector/保护	Function/assignment/功能描述
1.41A	Over current/过流	After hardware overcurrent, it needs to be powered off and restarted to recover 硬件过流后，电机停止，需要掉电重启才能重新启动电机
AC125V	Under voltage/欠压	After the input voltage returns to the protection value, the fan/motor will run normally 欠电压保护后，电机停止，若电压恢复正常电机继续运行
	Lock rotor/锁转子	If the fan/motor rotor is locked, stop motor enable and restart after 5 seconds 转子被锁或运行负载大于最大输出力矩时，电机随即停止五秒后重新运行
130W	Max. power/功率限制	The fan/motor is limited to maximum power 电机限制运行在最大功率以内

Figure 4 : PWM Duty/视图 4:PWM 占控比



Speed setting:
>90% PWM -> n = max.
ca. 10% PWM -> n = min.
<10% PWM -> n = 0

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Figure 5 视图 5

Noise & Vibration Test Setup 噪音&振动测试方案

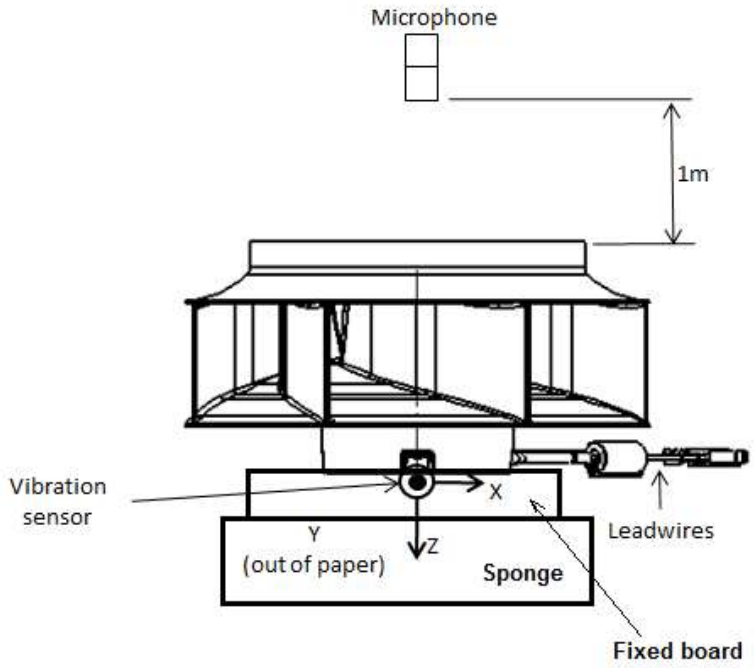
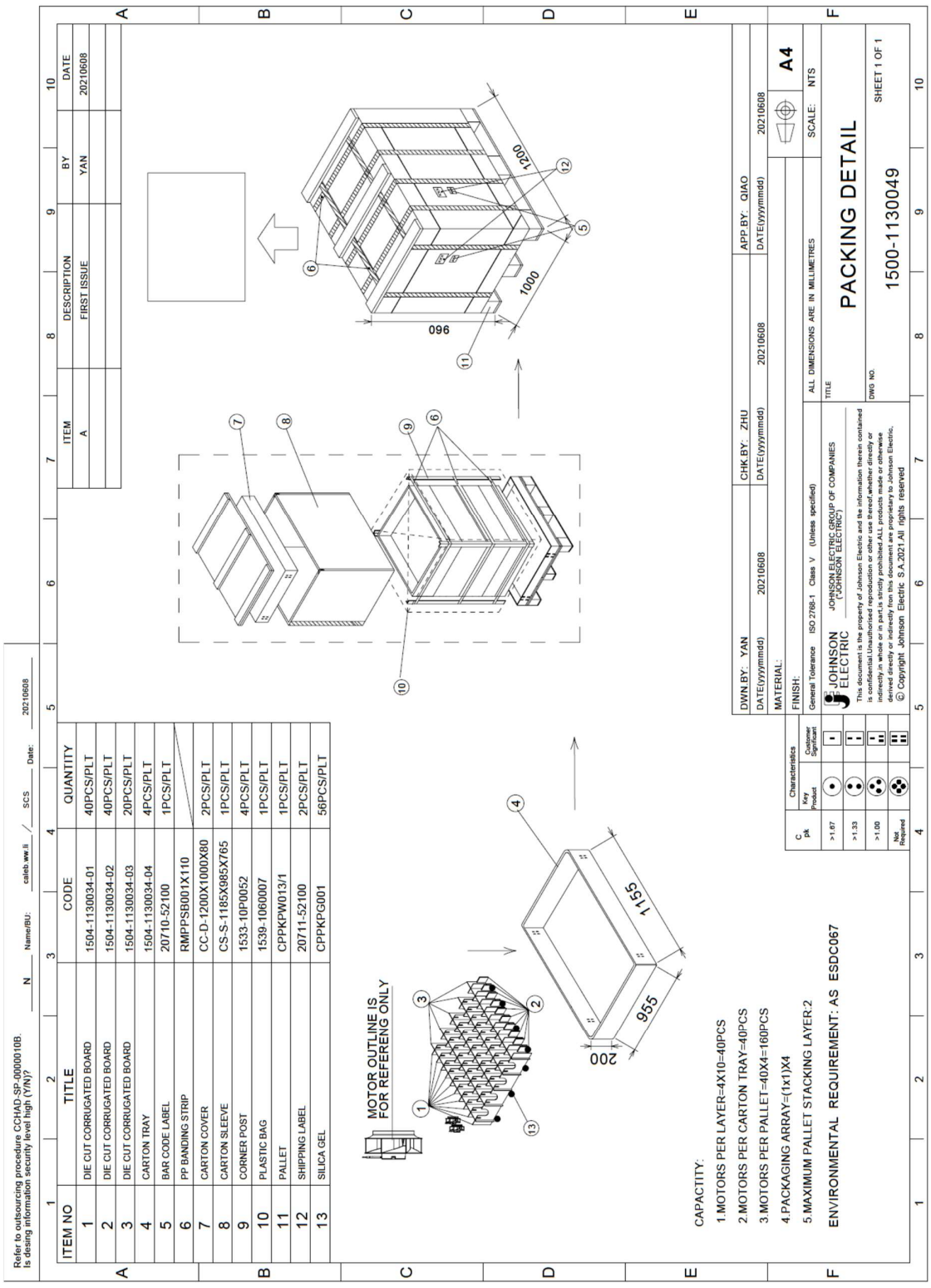


Figure 6 视图 6


MOTOR OUTLINE IS FOR REFERENG ONLY
960
1000
1200
1155
955
200
CAPACTITY:
1.MOTORS PER LAYER=4X10=40PCS
2.MOTORS PER CARTON TRAY=40PCS
3.MOTORS PER PALLET=40X4=160PCS
4.PACKAGING ARRAY=(1x1)X4
5.MAXIMUM PALLET STACKING LAYER:2
ENVIRONMENTAL REQUIREMENT: AS ESDC067
ITEM NO | TITLE | CODE | QUANTITY
1 | DIE CUT CORRUGATED BOARD | 1504-1130034-01 | 40PCS/PLT
2 | DIE CUT CORRUGATED BOARD | 1504-1130034-02 | 40PCS/PLT
3 | DIE CUT CORRUGATED BOARD | 1504-1130034-03 | 20PCS/PLT
4 | CARTON TRAY | 1504-1130034-04 | 4PCS/PLT
5 | BAR CODE LABEL | 20710-52100 | 1PCS/PLT
6 | PP BANDING STRIP | RMPPSB001X110 |
7 | CARTON COVER | CC-D-1200X1000X80 | 2PCS/PLT
8 | CARTON SLEEVE | CS-S-1185X985X765 | 1PCS/PLT
9 | CORNER POST | 1533-10P0052 | 4PCS/PLT
10 | PLASTIC BAG | 1539-1060007 | 1PCS/PLT
11 | PALLET | CPPKPW013/1 | 1PCS/PLT
12 | SHIPPING LABEL | 20711-52100 | 2PCS/PLT
13 | SILICA GEL | CPPKPG001 | 56PCS/PLT
ITEM | DESCRIPTION | BY | DATE
A | FIRST ISSUE | YAN | 20210608
DWN.BY: YAN | CHK.BY: ZHU | APP.BY: QIAO
DATE(yyyymmdd) 20210608 | DATE(yyyymmdd) 20210608 | DATE(yyyymmdd) 20210608
MATERIAL:
FINISH:
General Tolerance ISO 2768-1 Class V (Unless specified)
ALL DIMENSIONS ARE IN MILLIMETRES
SCALE: NTS
A4
TITLE
PACKING DETAIL
DWG NO.
1500-1130049
SHEET 1 OF 1
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Is desing information security level high (Y/N)?
N Name/BU: caleb ww li / SCS Date: 20210608
Characteristics
C. pk
Key Product
Customer Significant
>1.67
>1.33
>1.00
Not Required