

产品规格说明书

PRODUCT SPECIFICATION

FILLED BY BUYER	客户名称 Buyer Name		
	客户料号 Buyer Part No.		
	客户承认签章 Buyer Approved Signatures		
FILLED BY LEADER	文件编号 Spec No.	leader-6030	
	品名 Part Name	铁芯电机 Iron-core motor	
	型号 Model No.	LDTX480PA-6030F	
	样品承认日期 Date Samples Approved		
	作成 Designed by	检讨 Checked by	承认 Approved by
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规格书内容

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1. 适用范围/ Applicable Scope

本说明书适用于铁芯电机LDTX480PA系列.
This manual applies to the LDTX480PA series of iron core motors.

2. 使用条件/ Operating Conditions

NO./序号	项目/Item	规格/Specification
2-1	额定电压 Rated voltage	7.4V DC
2-2	使用电压范围 Operating Voltage Range	5V~9V DC
2-3	保存温度范围 Storage Temperature Range	-10℃ ~ +40℃
2-4	使用温度范围 operating Temperature Range	-20℃~+60℃
2-5	使用湿度范围 operating Humidity Range	30%~95% RH
2-6	回转方向 Direction of Rotation	CCW . (轴逆时针旋转) CCW. (axis rotates counterclockwise)
2-7	电机位置 Motor Position	全方向 omnidirectional
2-8	马达耐温等级 Temperature resistance grade of motor	H级(180℃) Grade H (180℃)


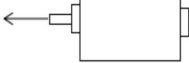
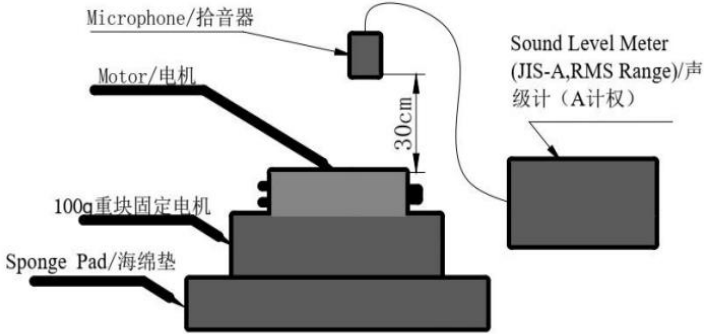
3. 测定条件/ Testing Conditions

NO./序号	项目/Item	规格/Specification
3-1	电机姿态 Motor Position	出力轴水平或垂直方向 Horizontal and vertical to output shaft direction
3-2	温度、湿度 Temperature or Humidity	常温（温度10-30℃） , 常湿（湿度30%-95% Rh） Ambient temperature: 10-30℃ & Relative humidity: 30%-95% Rh
3-3	电源 Power Source	使用直流稳压电源 Dc regulated power source, which has no doubt the results shall be used

4. 初期电气性能/ Initial Electrical Characteristics

NO./序号	项目/Item	规格Specification	条件/Condition
4-1	空载电流 No-load current	2. 1 A max	额定电压、无负荷 at rated voltage and no-load
4-2	空载转速 No-load Speed	14000±10% rpm	
4-3	堵转力矩 Start Torque	1930±300g.cm	
4-4	堵转电流 Starting Current	53 A max.	
4-5	无负荷启动电压 No-Load-Starting Voltage)	0.5 V max.	
1[mN.m]=10.197[gf.cm]; 1[gf.cm]=0.098[mN.m]			

5. 机械特性/ Mechanical characteristics

NO./ 序号	项目/Item	条件/Condition	规格Specification
5-1	外观 Appearance	无缺损、生锈、污损或变形 No scar, rust, stain or dent	符合图纸规格要求 Meet the requirements of drawing spec
5-2	外观尺寸 Outline Dimension	卡尺或千分尺 Measured by caliper or micrometer	
5-3	径向串动位 Radial bit	高度表 Height gauge 	0.05毫米以内 0.05mm max.
5-4	轴向串动位 Axially coupled bit	百分表或千分表 micrometer by dial gauge 	0.05~0.50毫米之间 0.05~0.50mm
5-5	电机电阻值 Motor resistance value	电阻测试仪 Resistance tester	135±20%毫欧 135±20% milliohm
5-6	机械噪音 Mechanical Noise	50dB(A)Max	
		<p>额定电压、空载 At rated voltage and No-load 背景噪音/Back ground noise: 30dB(A)MAX</p>  <p>Microphone/拾音器 Motor/电机 100g重块固定电机 Sponge Pad/海绵垫 Sound Level Meter (JIS-A,RMS Range)/声级计 (A计权)</p>	

6. 使用时注意事项/ Caution in Use

6-1、 确定和确保马达的匹配和合适于实际的操作和装备应用. 例如确定在实际的装配中又没有选择了合适的电子的征性, 机械性能, 机械和电子噪音, 储存环境和空气的影响等

Confirm and assure the matching and the reliability of the motor on actual set or unit application. The examples of the confirmation on actual set are the reliability, electric characteristics, mechanical characteristics, mechanical/electric noise, environmental storage, influence from atmosphere/gas etc.

6-2、 如果含有少量硅分子的化合物的材料及硅性材料, 被粘附在转向器和刷片等马达的其他部件上, 因为经电能的整流子会使硅分子化合物分解成氧化硅, 碳化硅和其他的成分,这样就导致了刷片和转换器之间的接触电阻增大.

因此无论是在装备马达还是在装配产品都应该小心,当硅性材料被用在装置时,检查好那些材料是不是放密封材料里, 以至于让它不能产生有害的气体对马达驱动电源的内阻有害的生气体的性质. 所以当使用中一些气体含有氰和硫磺时马达必须被适宜的分离,是为了不让他和空气中有害的成分接触.

If silicon materials, which contain low molecular silicon compounds, adhere to the motors commentator, brush or other parts, then upon rectification of the electric energy the silicon breaks down into SiO2, SiC []and other constituents which produce a rapid increase in the contract resistance between the commentator and brush.

Therefore great care should be taken when silicon material is used in a unit and check well at the same time that such binding agents or sealing materials are not generating gases of detrimental the internal resistance of the motor driving power source nature, whether used for motor mounting or applied during your product assemblies.

Care must be taken for an optimum selection, especially when using those of cyanic adhesive and sulfur gas.

6-3、 在使用接合剂粘合马达和物件时, 请不要让任何的接合剂粘到轴承或掉进马达内部,从而会影响马达的功能。

When mounting your motors by means of binding agents, DON’ T allow any adherence to the bearings nor intrusion into the motors.

6-4、 由于对马达的轴的输出方(及轴伸)的轴向推力也会影响马达的寿命, 例如,在装载蜗轮和风叶时用力过大会影响马达的寿命。 所以为了预防当马达在装配产品后的使用寿命比预期的短的现象出现, 当对于需要大力气装载负载时, 应该考虑使用某些协助性机器来帮助完成装载以便保护轴承的轴伸。

Axial thrust on the output shaft could have an adverse effect on the motor life. i.e. As is produced by worm gears, fans, etc.,

Check the service life expected under the actual operating conditions by testing the motors installed in your application products. For heavy thrust loads, consider using something mechanical to retain the shaft enc.

6-5、 也会出现马达驱动电源的内电阻(包含了一个电子的回路)能对马达的寿命产生影响的情况。例如当给马达输入一个低电压的情况时, 内部电源的电阻变高的, 会导致马达在一个短时间内坏掉。相反的当使用一个高的循环电压情况时, 内部电阻变小并且马达的生命周期也会变短。当温度不同于通常温时, 例如高或低的温度情况也会损害马达的寿命, 所以请注意马达的使用条件和环境。

There are occasions when the internal resistance of the motor driving power source (Which contains an electrical circuit) can influence the life span of the motor.

In instances where there is a low input of voltage to the motor, the internal resistance of the power source is large which may well result in an inferior motor after a short times, conversely in instances where high cyclic voltages are applied, this internal resistance is small and the motor life span is shortened. When the temperature deviates form the normal room temperature as is the case in low and high temperature situations, please note the conditions.

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6-6、过大的径向负载也会对马达的寿命产生有害的影响，例如旋转式的偏心轮，或外部带给电机的震动。为了避免这些所有的负面因素，请在装备产品时按照到马达的实际操作时所有需的合理条件来操作。

Motor life may be affected adversely by heavy radial load such as produced by rotating eccentric cams, est., and also by vibration given from outside.

DO check over such negative factors by testing the motors to the actual operating conditions in your application products.

6-7、如果当组装马达和装配配件时，有时使用会放射出超声波的设备， 这些设备会对马达的内部结构造成损害，所以请小心使用。

If when mounting the motor and assembling the unit, equipment which emits ultrasonic waves is used there is a danger that some of the internal parts of the motor might be damaged as please take care.

6-8、不要把马达贮存在高温和极度潮湿的地方。 也不要把马达存放在可能会出现有腐蚀气体的空气中， 因为这些都可能导致马达的功能被破坏。

DON’ T store motors under environmental conditions of high temperature and extreme humidity. DON’ T keep them also in an atmosphere where corrosive gas may be present, as it may result in malfunction.

6-9、操作环境和温度也会尽可能的或多或少的影响马达的性能和寿命。请特别的注意马达当在高温和潮湿的环境下。

Ambient and operating temperatures exert an affect more or less on motor performance and life. DO pay particular attention to the surroundings when it is hot and damp.

6-10、当在压入合适的滑轮和齿轮等入马达的轴身时，总是要有一个支撑力在轴的另一边或者要有一个固定的金属垫在合适的位子和正确的方法。

When press fitting a pulley, gear etc., onto the motor output shaft, always support the shaft at the other end or its retaining metal pad in a proper and correct way.

6-11、当焊接时，必须确保尽可能快地完成，以至于不会让马达的端子旁边的橡胶受到影响而变形扭曲和内陷。在这种情况下，特别小心不要让焊接的锡屑和松香溶液滴落到电机的里面,必要时通过掩盖周边所有的洞和缝隙的预防措施也是很重要的。焊接任何马达都要快速的离开端子，必须小心以免让松香流进端子与电刷之间， 因为这个可能导致电导的失灵。

When soldering, BE SURE to finish your work quickly so as not to develop plastic deformation around the motor terminals nor to give them any forced bend or inward depression. In doing so, special care must be taken not to allow solder debris and flux to spatter into motors andprecautionary measures should be taken if necessary, by covering up all the nearby holes and apertures. Any motors having snap-in terminals must also be attended carefully so as not to get flux in along the terminals, as it may cause failure in electrical conduction.

6-12、不要让马达的轴被锁住当供电时，因为即使只是锁住很短的时间也可能会令马达产生过多的热量堵塞,导致烧坏马达。

DON’ T leave motor shaft locked while power is applied, as even a short-time lock-up may cause excess heat build up resulting in burning damage to the motor depending on its specifications.

6-13、当后盖顶板受到强大的压力时可能会导致马达不可能运转. 所以在组装马达时不要给过大的压力.如果需要要去推动后盖地板时,请向我们拿取合适的加载力参数.

Intensive pressure on the endbell boss might cause starting disability of motor. So please take care for motor mounting not to push endbell boss. If the endbell boss must be pushed, the load should be put on the center of the boss. Please ask us for the suitable value of the load.

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6-14、请不要触碰电机的轴承,因为轴承上的防治噪音的润滑油会被抹掉.
Please do not touch motor bearing as otherwise bearing oil will be drawn out, which might cause bearing noise.

6-15、薰剂(消毒剂)和它的气体会影响马达的性能. 因此, 如果有些包装材料是包含薰剂的,马达不可以暴露在其中的.
Fumigant and its gas may affect motor performance. Then, motors shall not be exposed to fumigant and its gas, if fumigation shall be made for packaging material etc.

6-16、在马达外壳用染料打印的标号可能会变得模糊和对色当在摩擦的时候. 所以应该小心.
Identification marking drawn on motor housing with dyestuff marker may be blurred or may fade out when rubbing.

7.特性曲线图/Characteristics Graph

电机型号（Motor Model）：LDTX480PA-6030F

额定电压（Rated Voltage）：7.4V

客户名称（Customer）：

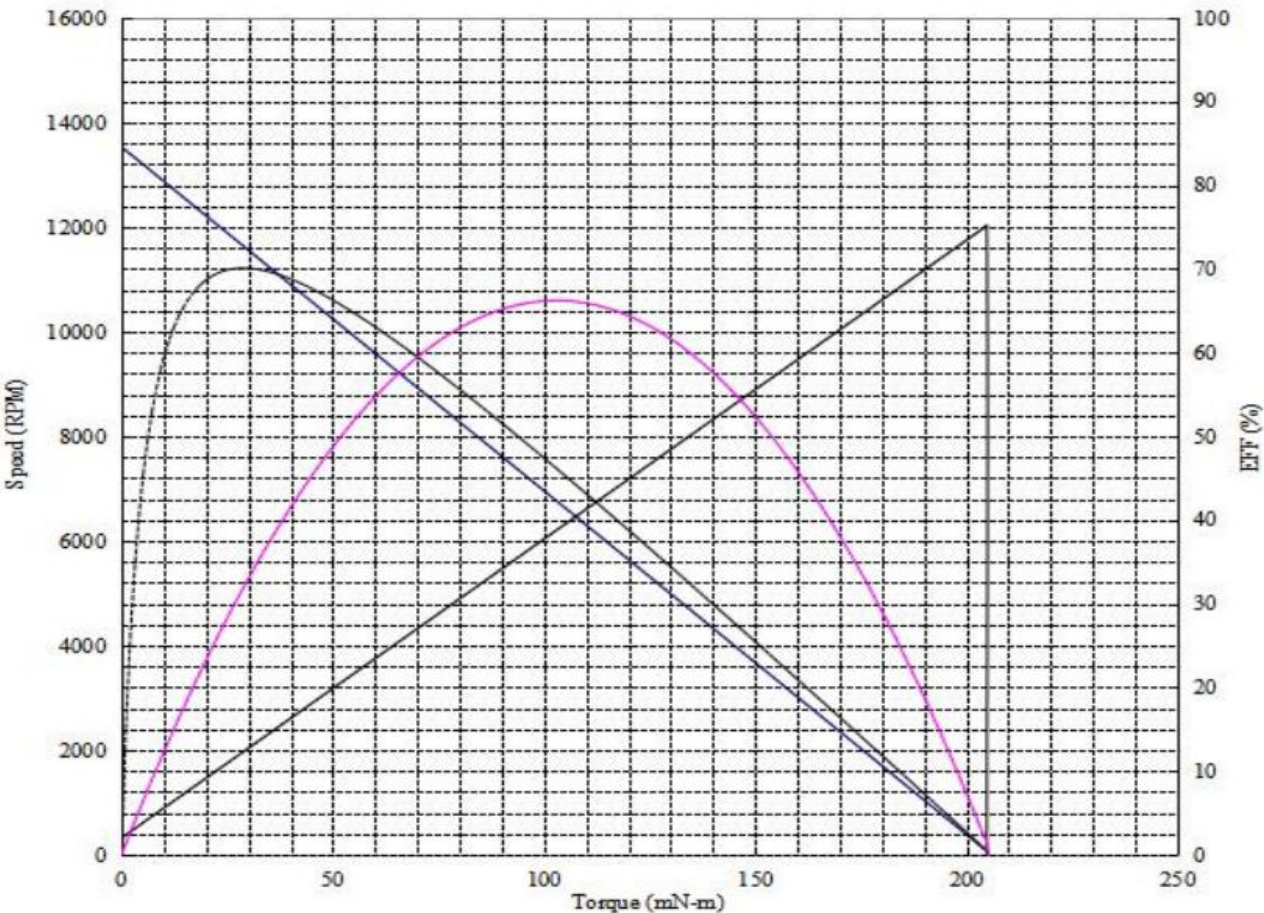
测试日期（Test Date）：2023/4/12

性能参数 (Electromagnetic Parameter) apeter

名称/Name	规格/Specifications	单位/Company
空载转速/No load Speed	13560	转/rpm
空载电流/No load Current	1.1	安/A
堵转力矩/Stall Torque	2060.00	克力. 厘米/gf. cm
堵转电流/Stall Current	37.80	安/A

最大效率点(Maximum efficiency)

效率/EFF	70.1	%
转速/Speed	11660	转/rpm
电流/Current	6.10	安/A
力矩/Torque	286	克力. 厘米/gf. cm
功率/Output	31.86	/af cm

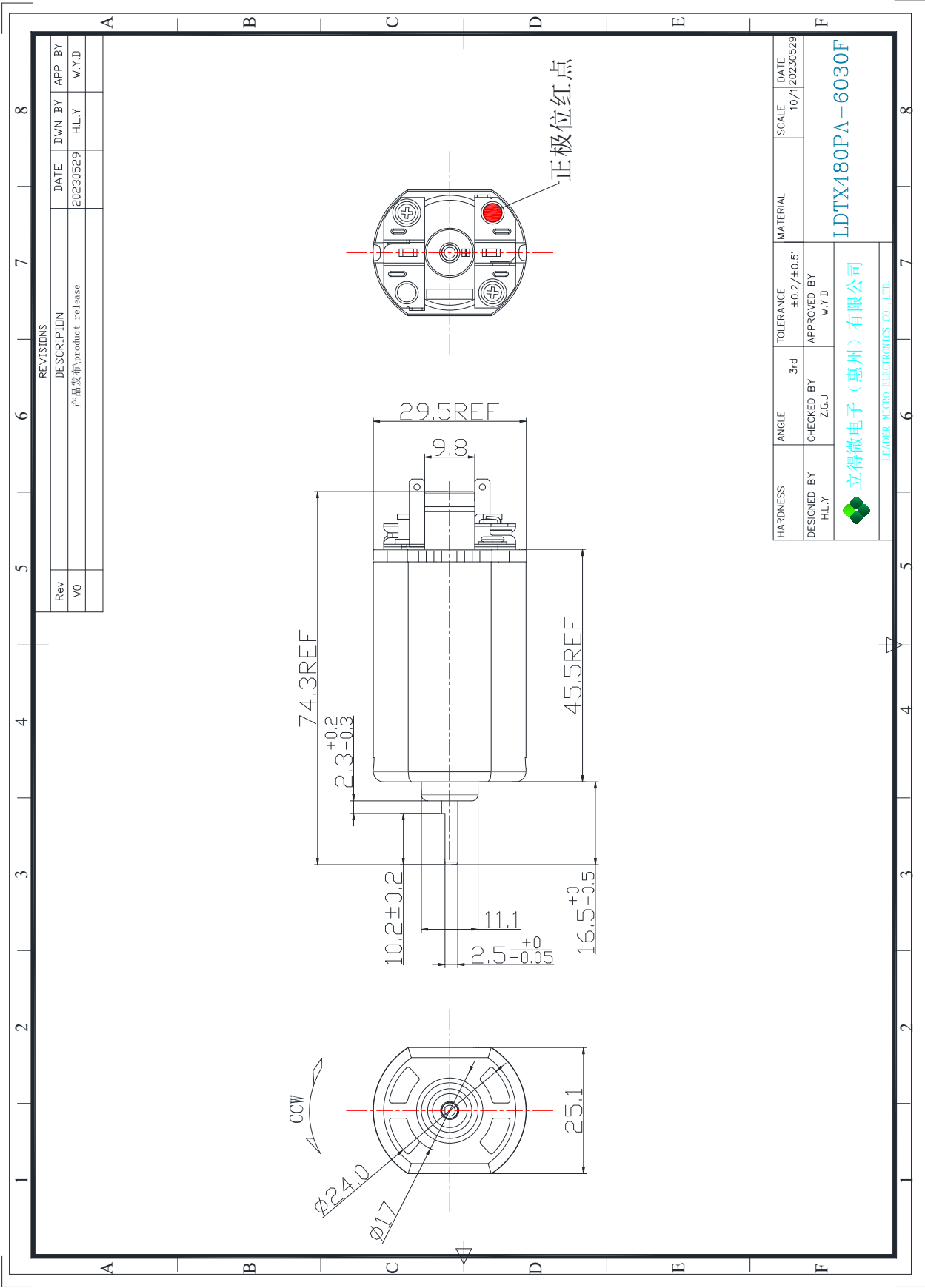


8. 产品包装规范/Product packaging specification :

产 品 包 装 规 范 Product packaging specification	
产品型号：型号/Model LDTX480PA-6030F	编制日期：2023年2月14日 Compilation date: February 14, 2023
编制部门：研发部 Preparation Department: Research and Development Department	版本/版次：A/0 Version/Edition: A/0
一、顾客或公司对产品的包装要求 Packaging requirements of customers or companies for products	
1、纸箱泡沫盒尺寸符合要求，外观应完整无缺且颜色均匀周边无批锋、无变形、无掉泡沫颗粒，包装盒内干燥无水珠。 The size of the foam box of the carton shall meet the requirements, the appearance shall be intact and the color shall be uniform, there shall be no batch front, no deformation, no foam particles falling around, and there shall be no water beads in the packaging box.	
2、箱买贴在纸箱侧面方格内，注明：品名、型号、订单编号、物料编号、数量、检查员印章、品管判定员印章、日期等，客户如有特殊要求还须注明。 The box shall be affixed to the side square of the carton, indicating: product name, model, order number, material number, quantity, inspector's seal, Quality control judge seal, date, etc., if the customer has special requirements must also indicate.	
3、在外包装箱正面上方处的对面中间贴上‘R0HS’标签。 Label 'R0HS' in the middle of the front of the outer packing box.	
4、外箱封胶纸须垂直封好后，再将纸箱侧面四个棱角封住。 The outer box sealing paper shall be sealed vertically, and then the four angles on the side of the carton shall be sealed.	
5、马达一层装30个，一箱马达装5层。 a layer of motor installed 30, a box of motor installed 5 layers.	
6、纸箱尺寸39cm✖28cm✖29cm Carton size 39 cm ✖ 28 cm ✖ 29 cm	



9. 外形图/ Mechanical Drawing:



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10. 更改记录/ Revision Records:

CUSTOMER 顾客		SPEC NO 规格书号	编号/No.: leader-6030
PRODUCT MODEL 产品型号	LDTX480PA-6030F	DATE 日期	2023.05.29

REVISION RECORDS
修改记录表

REV NO 修改号	DATE 日期	PAGE 页码	REVISION ITEM 修改项目	REASON 更改原因
REV,0	2023.05.29	/	产品发布	