



产品规格书

PRODUCT SPECIFICATION

客户名称Buyer Name	
客户料号Buyer Part No.	
客户承认签章 Buyers Approval & Signatures	

文件编号Spec No.		版本	A/0
品名描述 Product Description	线性振动马达 LINEAR VIBRATION MOTOR		
型号Part No.	VLV261813-60H		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
2024.07.26	2024.07.26	2024.07.26	

www.vybronic.com

sales@vybronic.com

更改记录/Revision History

Rev. No.	Rev. Date	Page No.	Revised Item	Reason
A/0	2024.07.26	/	Preliminary Spec/初始规格	

TABLE OF CONTENTS**目录表**

NO.	CONTE (内容)	PAGE (页码)	NOTE (备注)
1	Operating scope 适用范围	4	
2	Storage/Operating / Measure environmental conditions 使用和储存条件	4	
3	Measuring Conditions 测试条件	4	
4	Product performance 制品性能	5	
5	External performance 外观性能	6	
6	Reliability test 可靠性试验	6	
7	Outline drawing 外形图	7	
8	Encoding rules 编码规则	8	
9	Packaging requirements 包装要求	8	
10	Caution for Use 使用注意事项	8	

1. Operating scope 适用范围

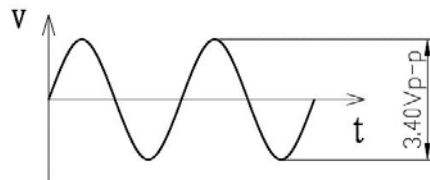
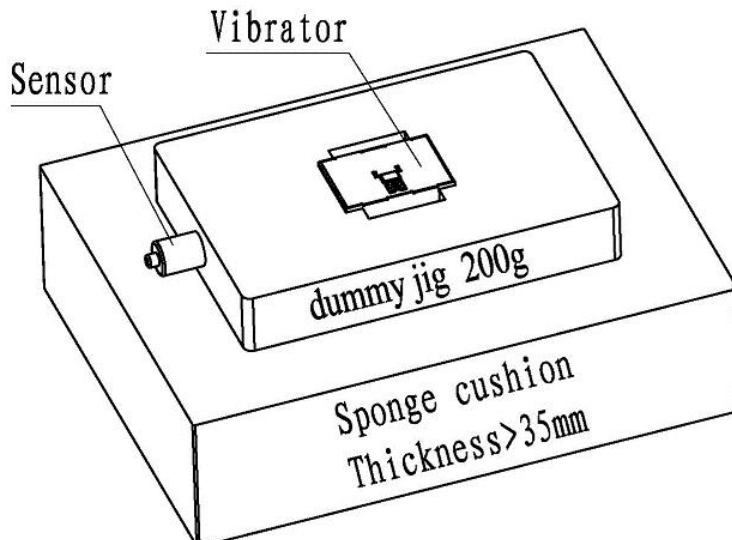
This specifications apply to Vybronic linear vibrator model VLV261813-60H.

本规格书适用于Vybronic VLV261813-60H 线性振动器。

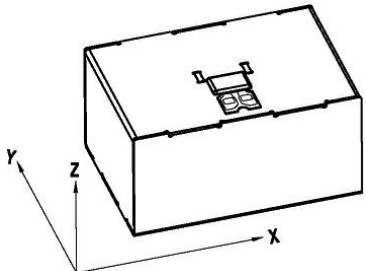
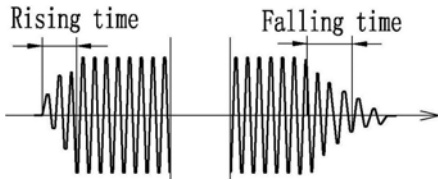
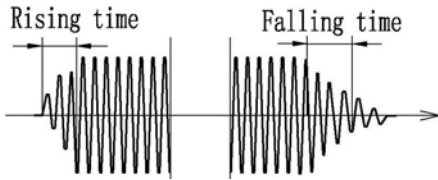
2. Storage, Operating temperature / Humidity conditions (储存、使用温度/湿度条件)

NO.	Items (项目)	Conditions (条件)
2-1	Operating Environmental 使用环境	Temperature / 温度: $-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$ Humidity / 湿度: $5 \sim 95\% \text{RH}$
2-2	Storage Environmental 储存环境	Temperature / 温度: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Humidity / 湿度: $5 \sim 95\% \text{RH}$

3. Standard measurement conditions (标准测试条件)

No.	ITE 项目	SPECIFICATION/规定	
3-1	Temperature/温度	$20 \pm 5^{\circ}\text{C}$	
3-2	Humidity/湿度	$(65 \pm 20\%) \text{RH}$	
3-3	Rated voltage 额定电压	AC Mode AC 模式	$1.2 \pm 0.05 \text{V}_{\text{rms}}$ $(V_{\text{p-p}} = 3.40 \text{V})$ 
3-4	Operating Frequency 工作频率	@F0 ($F0 \in 60 \pm 5 \text{Hz}$)	
3-5	Measuring method 测量方法	<p>Place Vibrator horizontally (Lock the Vibrator on a 200g dummy jig) 振动器水平放置 (固定在 200 克的测试夹具上)</p> <p>The direction of the sensor as same as the direction of Vibrator vibration (As item 4-2) 传感器检测方向和振动器振动方向保持一致。(参见项目 4-2)</p> 	

4. Product performance (制品性能)

NO.	ms(项目)	Requirements (要求)	Conditions Or Remark (条件/备注)		
4-1	Shape size 外形尺寸	L22 W118H13(mm) not included Welding lead position 不包含引线焊接部位	 Details refer to page 7		
4-2	Vibration direction 振动方向	X axis			
4-3	Operating Attitude 工作姿态	All direction (全方向)			
4-4	Weight/重量	24±2g			
4-5	Rated voltage 额定电压	1.2Vrms	Sine wave/正弦波		
4-6	Operating voltage 工作电压	Maximum: 1.8Vrms	Sine wave/正弦波		
4-7	Impedance 阻抗	8.0±1.0Ω	AT 20°C, LCR meter, sine wave,200Hz, 1.2Vrms		
	Direct resistance 直流电阻	8.0±1.0Ω	AT 20°C		
4-8	Insulation resistance 绝缘电阻	10MΩ(Min)	100V DC, Between the vibrator terminal and case. 测试电压 DC100V,端子和外壳间。		
4-9	Resonant Frequency 谐振频率	60±5Hz	Load 200g as items 3-5 负载 200 克, 参见项目 3-5		
4-10	Acceleration 振动加速度 (Gp_p)	Frequency (Hz)	lower limit	upper limit	work fixing jig: As items 3-5 装夹方式: 参见项目 3-5 Input voltage : Sine wave 1.2Vrms 输入电压: 正弦交流 1.2Vrms Input frequency /输入频率: Sweep 35 ~ 300Hz,Step 1Hz/0.5S 35 ~ 300Hz 扫频, 步长 1Hz, 每步 0.5 秒 测量值: 峰峰值 (Gp_p)
		40	0.40	0.80	
		60	2.40	3.40	
		100	.70	1.2	
		200	.50	0.90	
300	.40	0.80			
4-11	Rise time 启动时间	≤40ms @60Hz,1.2Vrms	Acceleration rise to 1.5Gp_p 加速度上升至 1.0 Gp_p 		
4-12	Falling time 断开时间	≤60ms @60Hz,1.2Vrms	Acceleration down to 0.5Gp_p 加速度下降到 0.5Gp_p 		

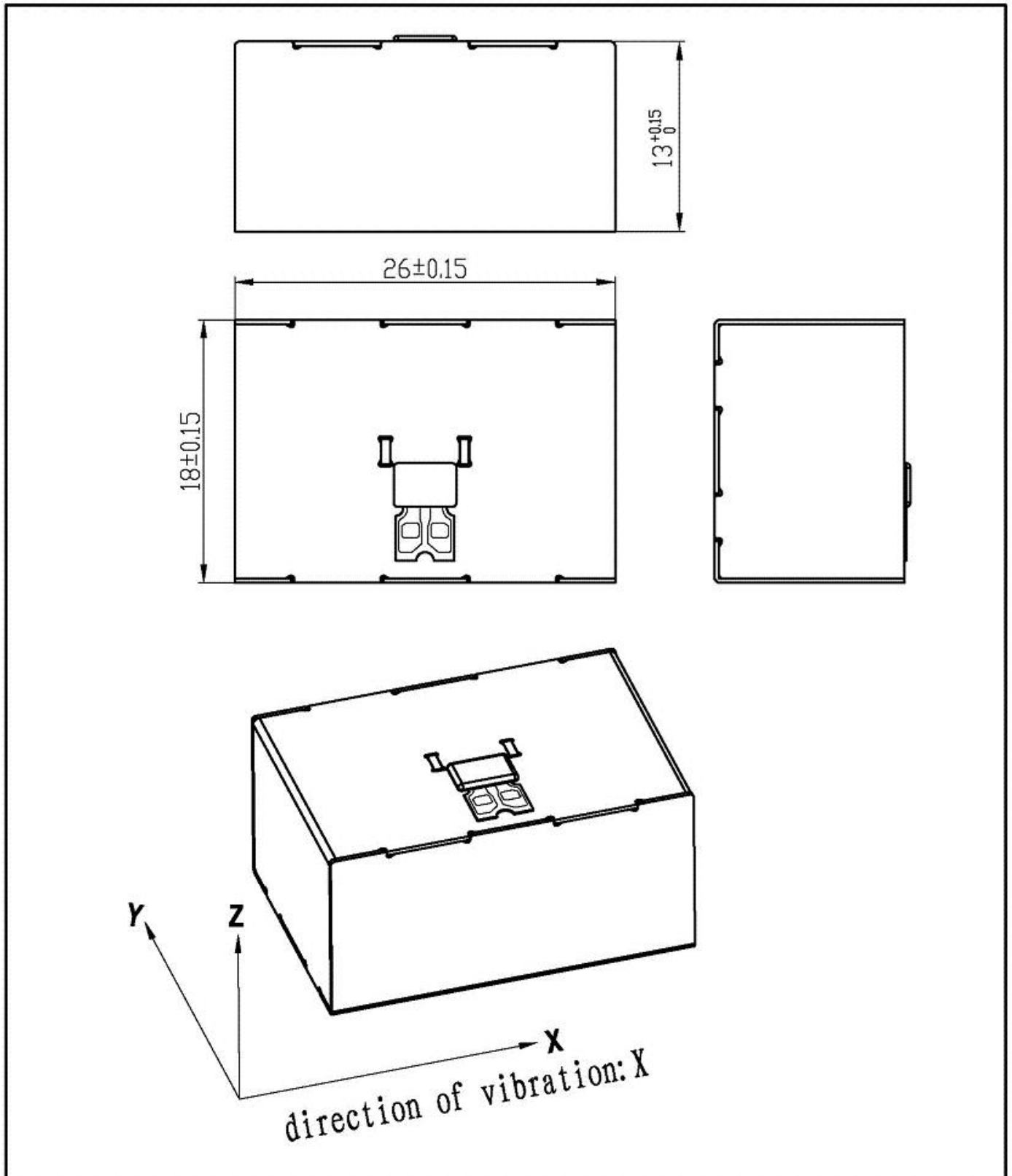
5. External performance (外观性能)

it should not remarkable wound and deleterious defect, No distortion、rust、stain, etc.
 不应有明显的划伤、有害缺陷，无变形、锈蚀、污迹等。

6. Reliability test 可靠性试验

NO.	ms(项目)	Standard test conditions(标准试验条件)	Judgment (判定)
6-1	Life test 寿命试验	Lock the vibrator on a test fixture (200g JIG) 振动器固定在 200g 的测试夹具上。 Temperature/温度: 25±5℃ Humidity/湿度: 65±20%RH Sine wave 1.2Vrms, f=60Hz 正弦交流电 1.2Vrms, 频率 60Hz Test model/试验形式: 1S ON 1S OFF Total times:100 million times(100 万次/23.15Days)	After the test, vibrator shall be satisfy with specified in item 6-8 试验结束后, 振动器应满足 6-8 中规定的要求。
6-2	Low temp Storage 低温存放试验	Temperature (温度): -20±2℃ Test time (试验时间): 240 hours	After the test, After 2 hours placed in ordinary temperature and humidity, vibrator shall be satisfy with specified in item 6-8 试验结束后, 在常温常湿中放置 2 小时后, 振动器应满足 6-8 中规定的要求
6-3	High temp storage 高温存放试验	Temperature (温度): 60±2℃ Test time (试验时间): 240 hours	
6-4	Heat shock 温度冲击	-30℃/+65℃ 2hours/cycle,24cycles. 低温-30℃, 高温+65℃, 2 小时切换, 24 个循环	
6-5	Humidity storage 湿热存放试验	Temperature (温度): 65±2℃ Humidity (湿度): 95%RH Test time (试验时间): 240hours	
6-6	Drop test 跌落试验	Dummy JIG 200g , drop to the granite floor. 治具 200g, 自由落体到花岗岩板上 Height/高度: 1.2m Direction/方向: 6 faces and 12 sides of the JIG . Times/次数:Each direction 1 drop, totaling 18 times. 每方向跌落 1 次, 共计 18 次	After the test, vibrator shall be satisfy with specified in item 6-8 试验结束后, 振动器应满足 6-8 中规定的要求。
6-7	AFTER TEST REQUIREMENTS/试验后特性判定		
	1、 Acceleration within ±30% from initial./加速度变化在初始值的±30%内;		
	2、 Insulation resistance within±20% from initial./绝缘电阻变化在初始值的±20%内;		
	3、 Terminal resistance within±20% from initial./ 端子电阻变化在初始值的±20%内;		
4、 No signs of corrosion/无明显腐蚀迹象			

7. Outline drawing (外形图)



8. Encoding rules 编码规则

To be determined according to customer's requirements
依据客户需求确定

9. Packaging requirements 包装要求

50 pcs per box, 5 boxes per bundle, 2 bundles per box, 500 total.

每盒 50PCS, 每捆 5 盒, 每箱 2 捆, 共 500PCS

10. Caution for Use 使用注意事项

- 10-1. Please use vibrator in the specification of this specification. Otherwise the service life and performance of the vibrator will be affected. 请在本规格书规范内使用振动器, 否则会影响振动器的使用寿命和性能。
- 10-2. Make arrangement to limit the storage period to 2 years or less. 请在 2 年内使用。
- 10-3. please do not push the load of 15N or more on the surface of the vibrator, when exceeding 20N, it causes the trouble. 振动器表面承载压力不得超过 20 牛顿, 否则可能会导致功能故障。
- 10-4. Vibrators should be firmly fixed in the direction of vibration (Recommended Installation Force 5-8N), Otherwise it will be prone to noise. 振动器应牢牢固定在振动方向上 (推荐安装力 5-8N), 否则容易产生噪声。
- 10-5. Please lay the vibrators carefully in transportation to avoid any serious damage to the vibrator body or its electric function because of collision. 在运输过程中应小心轻放, 避免振动器碰撞受损
- 10-6. when soldering FPCB, The soldering iron temperature does not exceed 350 degrees and the soldering time per spot does not exceed 3 seconds. 焊接 FPCB 时, 电烙铁温度不超过 350°, 每个点焊接时间不超过 3 秒。
- 10-7. Vibrators can't be used in high temperature, High humidity and corrosive gas environment. 振动器不能在高温、高湿度和有腐蚀性气体环境中使用。
- 10-8. The vibrator has a strong magnet, So please be aware that it has a magnetic force on the surface of the bracket. 振动器有一个强的磁铁, 因此请注意, 它的支架表面有磁力。
- 10-9. Under the conditions of meeting this specification, our company can change the material, size and shape of parts to improve quality, performance or production efficiency. 在满足本规范的条件, 我司可以改变零件材料、尺寸及形状来改善品质、性能或生产效率。
- 10-10. If there is any argument on vibrator performance and/or life, judgment is to be made base on this specification only. 如对振动器的性能和 (或) 寿命有任何争议, 仅基于此规格书作出判断。