



深圳市威佳电子有限公司

SHENZHEN CITY VEGA ELECTRONIC Co.,LTD

样品承认书

APPROVAL SHEET



客 户

(Customer):

贵公司部品名称
(PART NAME):

本公司部品名称
(PART NAME):

旋转编码开关

贵公司部品型号
(PART NUMBER):

本公司部品型号
(PART NUMBER):

VR7D-10RL

客户确认 (CUSTOMER APPROVAL)

接受印
ACKNOWLEDGEMENT
THIS DOCUMENT

兹证明此份材料已收到

WE ACKNOWLEDGE RECEIVING

DATE: / /

G. MGR	LEADER	CHECKED	SIGNED

审核结果:

APPROVAL RESULT:

合格
OK

不合格
NG

说明:

REMNRK

确认后敬请回签 1 份

本厂工程部审核:

ENGINEERING DEPT:

制 样
DSGD BY

陈 阳

审 核
CHKD BY:

李国强



DATE OF ISSUED: 2014. SEP. 18



深圳市威佳电子有限公司

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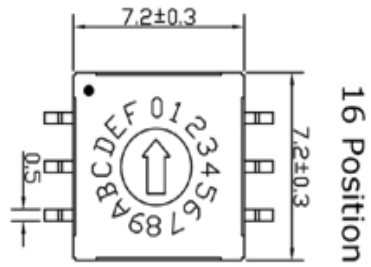
Tel: 86 (0) 755-21505670 21505672

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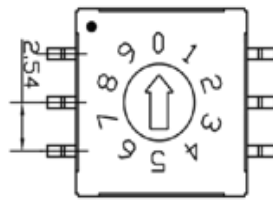
Http: www.ve-vega.com

E-mail: sz_vega@126.com

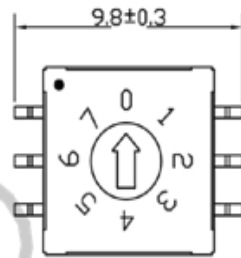
Address: 中国广东省深圳市福永镇怀德嘉盛工业园1栋
Building 1, HuaiDe Building jiasheng, FuYong BaoAn,
ShenZhen, China



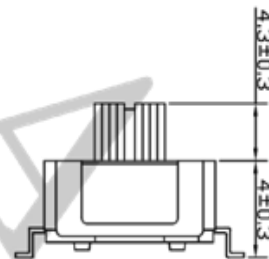
16 Position



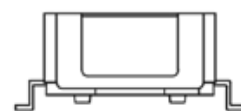
10 Position



08 Position

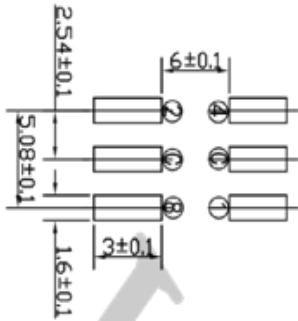


H=4.3MM Actuator



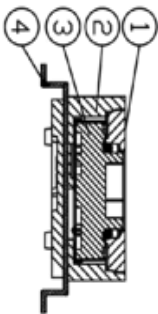
Recessed Actuator

CIRCUIT DIAGRAM

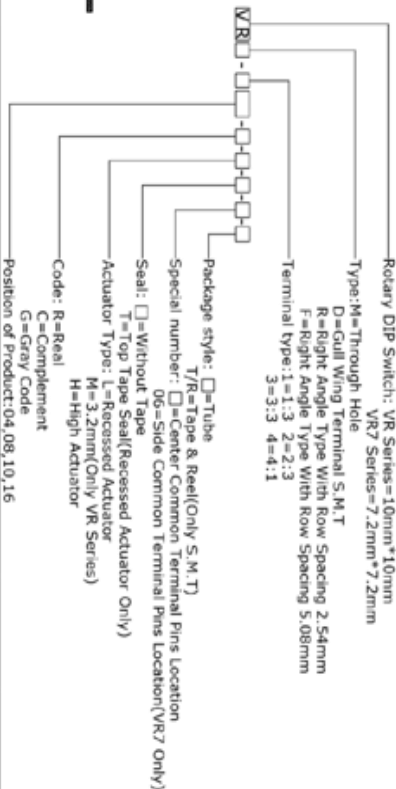


CONSTRUCTION

ITEM	DES	MATERIALS	TREATMENT
1	COVER	Stainless Steel cover	WHITE
2	BASE	ENGINEERING PLASTICS	BLACK
3	ROTOR	ENGINEERING PLASTICS	WHITE
4	TERMINAL	ALLOY COPPER	GOLD



PRODUCT NAMING:



REAL CODE:

R	C	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
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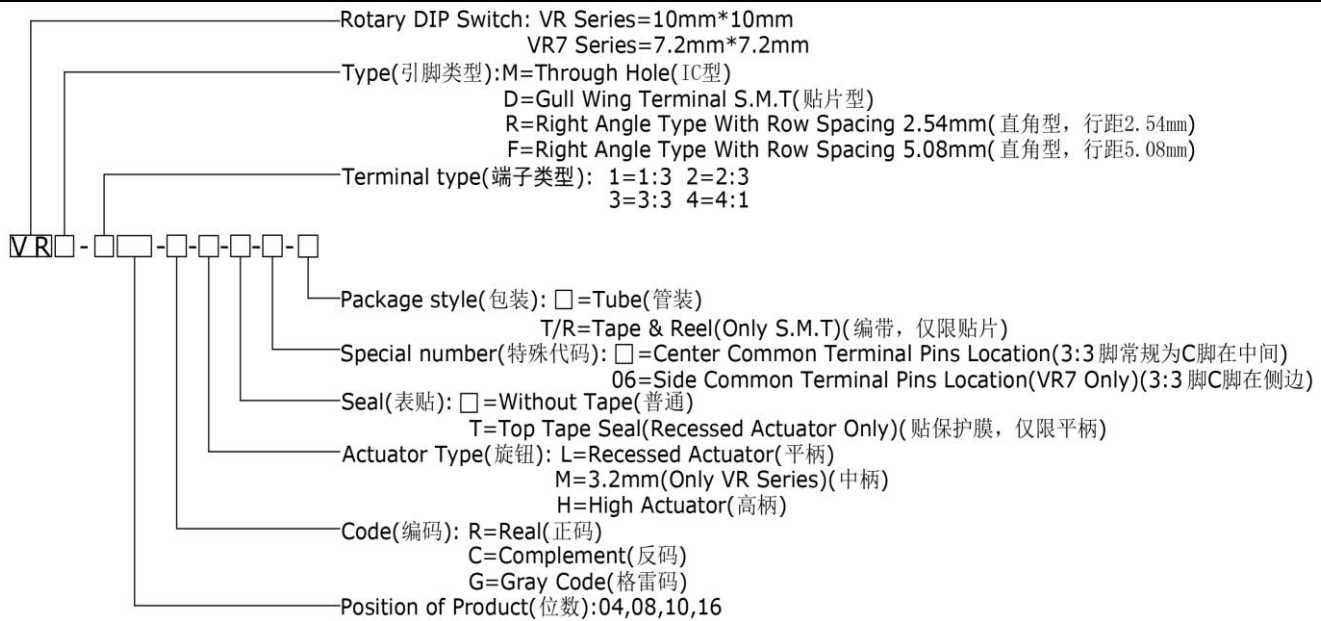
DATE	BY	CHK	APP	REV	UNIT
2014/09/16	VR03	OK	3	1	mm
				2	mm
				3	mm
				4	mm
				5	mm

TITLE	BY	CHK	APP	REV	UNIT
VR03 SERIES PITCH 2.54mm	VR03	OK	3	1	mm
				2	mm
				3	mm
				4	mm
				5	mm

FILE NO	REV	UNIT
VRD3-A	1	mm
	2	mm
	3	mm
	4	mm
	5	mm



1. 产品命名 PRODUCT NAMING:



2. 开关种类 jack action :

VR系列微型旋转编码开关 (Mini Rotary Dip SWITCH VR SERIES)

3. 基本参数 General specification

3.1 材料 Materials

上盖: 不锈钢, 白色	COVER: Stainless steel Cover, White
底座: 工程塑料, 黑色	BASE: Engineering Plastics, Black
转键: 工程塑料, 白色或橙色	KEY: Engineering Plastics, White or Orange
端子: 铜合金, 镀金或镀锡	TERMINAL: Alloy Coper, Plating Gold or Tin

3.2 额定值 RATING: 开关常切换 (Contact rating)	25mA	24VDC
开关不常切换 (Non-Contact rating)	100mA	50VDC

3.3 使用温度试验范围 Operation temperature range :	- 25 ~ + 70℃
保存温度范围 Preservative temperature range :	- 40 ~ + 85℃

3.4 外形及尺寸 Appearance and dimensions : 见外形尺寸图 See outside drawing page

3.5 试验、测定状态, 在没有指定的情况下测试温度、湿度、气压如下:

Unless otherwise specifide. the standard range of atmospheric conditions for making measurements and tests are as follows

温度	Ambient temperature :	5 ~ 35℃
相对湿度	Relative humidity :	45 ~ 85%
气压	Air pressure :	86 ~ 106kPa (860~1060mbar)

但是在对判定产生疑义时, 按下述状态实施

However, if doubt arises on the decision based on the measured Values under the above-mentioned conditions, the following conditions shall be employed:

温度	Ambient temperature :	20±2℃
相对湿度	Relative humidity :	65±5%
气压	Air pressure :	86 ~ 106kPa (860~1060mbar)



4. 电气特性 ELECTRICAL SPECIFICATIONS

ITEM 项目	TEST DESCRIPTION 测试描述	TEST CONDITIONS 测试条件	Standards 判定基准
4.1	Contact Resistance (initial) 接触电阻	To be measure with AC 1KHz±200Hz (Max 20mv, Max 50mA) or 10mA, 5V DC 1千赫兹±200Hz (在最大电压200mv, 最大电 流50mA) 或10mA, 5v直流测试	Max 100mΩ 最大100毫欧
4.2	Insulation Resistance 绝缘电阻	To be measure with an insulation measuring device of 100VDC between all the teminals and the frame for 1 minute ±5seconds. 在排脚相互之间或排脚与外壳之间输入 100V直流电压1分钟±5秒	Min 100MΩ 100MΩ 以上
4.3	Dielectric strength 耐压强度	AC500V (50-60HZ, 1mA current) being applied between all the adjacent terminals and between the terminal and frame for 1 minute 在接触端子或排脚之间输入250VAC (50-60 赫兹) 电压1分钟, 感应电流为1mA	NO breakdown insulation 没有绝缘破损异常

5. 机械特性 MECHANICAL

ITEM 项目	TEST DESCRIPTION 测试描述	TEST CONDITIONS 测试条件	Standards 判定基准
5.1	Operation force 操作力	Applied in the direction of operation 在同一方向	Max 500gf-cm 最大为500gf-cm(可正常旋转)
5.2	Terminal strength 端子强度	A static load of 500gf shall be applied To the terminal for 1 minute, in any direction 在排脚前端任意一个方向加 500gf 力度 测试, 时间为1分钟.	Electrical characteristics shall be satisfied without damage or excessive looseness of terminals. 在排脚中没有裂开. 松动等异 常, 满足于机械、电器性能.
5.3	Soldering heat test 耐焊接热	Soldering temperature : 260 ± 5°C soldering time : 5 ± 1 sec. 焊接温度: 260 ± 5°C 焊接时间: 5 ± 1 秒	WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TEMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED. 本体无变形, 能满足于机械、电器 性能

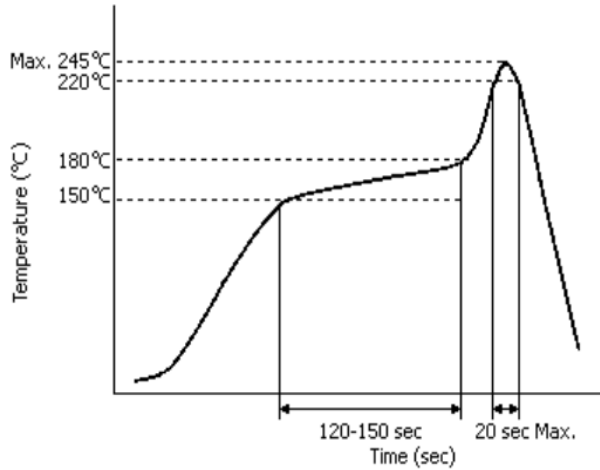


ITEM 项 目	TEST DESCRIPTION 测试描述	TEST CONDITIONS 测试条件	Standards 判定基准
5.4	Operation life 运动寿命	2000 steps per position at a rate of 15~20 cycle/minute 15-20次/分钟 寿命最少为2000转	Contact resistance Max 100mΩ Insulation resistance min 1000mΩ with DC 100V Dielectric breakdown voltage: 250V 1 minute no breakdown instulation Operating force±30%gf before test No.4.1 shall Be satisfied There shall be no defects in appearance or in the mechanical functions 接触电阻 Max 100mΩ 绝缘电阻 min 1000mΩ.min. at 100VDC 动作力的变化范围在初始值的± 30%以内, 满足 4.1项 无论是在外观上还是在机械功能 上, 都不得有任何缺陷
5.5	Solderbility 可焊性	After sprated flux temperature :230± 5°C soldering time :2±0.5 sec 涂上助焊剂后, 温度: 230± 5°C, 焊接时间: 2±0.5 秒	95% or more of surface area of the portion immersed in solder shall be covered by new solder 95% 或更多的浸焊面积能 被焊锡覆盖.
5.6	Soldering heat test 耐焊接热	Soldering temperature : 260± 5°C soldering time : 5 ±1 sec. 焊接温度: 260± 5°C 焊接时间: 5 ±1 秒	WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENESS OF TEMINALS ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED. 本体无变形, 能满足于机械、电器 性能
5.7	Vibration test 耐振性	Amplitude: 1.5 mm Sweep rate: 10-50-10HZ for 1 minute Sweep method: Logarithmic frequency sweeprate Vibration direction : X, Y, Z(3 directions) Time : Each direction 2 hours (Total 6hours) 全振幅: 1.5 mm 时间: 每个方向2 个小时(共6 个小时) 扫描速度: 10-50-10HZ 1 分钟 扫描方式: 对数频率扫描速度 振动方向: X, Y, Z (3 方向)	No damage (electrical andmechanical) 无异常。(电气、机械特性)

6. 焊接 SOLDERING

1. 波焊：(DIP)型推荐焊接焊锡温度为260℃ (500°F), 最多5秒
2. 手焊：使用30W烙铁控制温度在350℃, 焊接时长约3秒
3. 回炉焊：(SMT)型回焊炉最高温度为245℃, 温度为245℃时, 最长时间不超过5秒 (如图)

1. Wave soldering: recommened solder temperature at 260°C (500° F) max. 5 seconds
2. Hand soldering: use a soldering iron of 30 watts controlled at 350°C approximately 5 seconds. while applying solder
3. Reflow soldering profile: (reference)



7. 包装资料 PACKING

所有旋转编码开关产品均以IC管形式包装。

All code switches are shipped in standard IC tube

系列 SERIES	每管数量 PER TUBE	每小箱数量 PER BOX	外箱包装 PERCTN
VR7M	50	1000	5 BOXES 53X27.5X14CM
VR7D	50	1000	
VR7R	50	1000	
VR7F	50	1000	

贴片型可采用盘带包装, 每卷为1000只
SMT type can be shipper in tape & reel packing, the quantity is 1000 pcs/reel