





国家高新技术企业



浙江省“专精特新”企业



GNBER 网本电子

国家高新技术企业





先进的设备，规模化的生产

The superior equipment, Scale production



一流的生产设备

冈本电子拥有专业的技术研发团队，严格的质量管理体系。

为您提供专业的工控开关解决方案。

GNBER Electronics has a professional technical research and development team and a strict quality management.

Provide you with professional industrial control switch solution.

资质证书 Qualification Documents

RoHS指令(电子电器设备中有有害物质使用禁止令)

RoHS Directive (Restriction of The Use of Certain Hazardous Substances IN Electrical and Electronic Equipment)

针对2006年7月起执行的RoHS指令，网本对原材料的使用进行了相应的调整，我们已在大部分产品中禁止使用不符合RoHS指令中规定含6种有害化学物质的原材料，我们将持续改善，向对地球环境不造成伤害的清洁产品制造迈进。

In the light of RoHS directive enforced in July, 2006, Gnber took some measures on adjusting the raw material, our products are disallowed to use 6 kinds of harmful raw material specified in RoHS directive, we will continue to make efforts for the improvement of the products step by step and developing toward the green products not harmful for the global environment.

产品认证 Product Certification

网本积极参与世界各国针对产品的研发并申请专利和认证。

Gnber Actively participate in the research and development of products in the world and apply for patents and certification.





产品索引 Product Content



P01-P02
RS系列
RS Series Micro Switch



P03-P04
RS2FW IP67系列
RS2FW Series IP67 Waterproof switch



P05-P08
RV系列
RV Series Micro Switch



P09-P13
RZ系列
RZ Series Micro Switch



P14-P17
RX系列
RX Series Magnetic Blowout Microswitch



P18-P19
RDZ系列
RDZ Series Double Contact Microswitch



P20-P22
RA系列
RA Series Package Microswitch



P23-P26
RCSK系列
RCSK Series Magnetic Blowing Microswitch



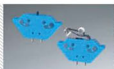
P27-P28
RS847 IP67系列
RS847 Series IP67 Waterproof switch



P29
RLXW20系列
RLXW20 Series Micro Switch



P30-P33
RLXW24 IP67防水系列
RLXW24 Series IP67 Waterproof series



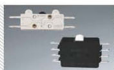
P34
RLXW32系列
RLXW32 Series Micro Switch



P35-P36
RLXW33系列
RLXW33 Series Micro Switch



P37-P38
LX19K-8/RLXW2-11系列
LX19K-8/RLXW2-11 Series Microswitch



P39-P41
RLXW35-11/RLXW25-22系列
RLXW35-11/RLXW25-22 Series Travel Switch



P42-P45
RT系列
RT Series Toggle Switch



P46-P48
RME系列
RME Series Travel Switch



P49-P50
RWL系列
RWL Series Double Circuit Travel Switch



P51-P54
RLS系列
RLS Series Travel Switch



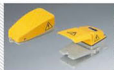
P55-P57
RSA系列
RSA Series Travel Switch



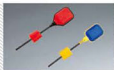
P58-P59
RHL系列
RHL Series Push Button Switch



P60-P61
RBSN/RCZ系列
RBSN/RCZ Series Safety switch



P62-P64
RFS系列
RFS Series Pedal Switch



P65
RY系列
RY Series Float Switch

RS 系列微动开关

RS Series Micro Switch

超小型、性价比、性能优良的微型开关

Micro switch in mini-type, good performance and Affordable price

(尺寸单位Size Unit : mm)



(按钮型 Button Type)

特点 Characteristic

1、最高容量可达The highest capacity reach 10A 250VAC

2、长寿命 Long life

△ 机械性 Mechanical: 可达100万次 / 30,000,000 operations/min

△ 电气性 Electrical: 50,000以上operations/min(10A 250VAC)

100,000以上operations/min(5A 250VAC)

200,000以上operations/min(3A 250VAC)

3、动作位置(OP)精度高按钮型可达 8.4 ± 0.5 mm

Action seat(OP) with high accuracy button reach 8.4 ± 0.5 mm



4、已通过CCC、CE认证 Certicate: CCC、CE

5、符合RoHS指令 Meet the RoHS directive

额定值及性能概述 Rated value and performance

项目 Item	分类 Type	10A、5A、3A/125,250VAC(阻性负载 Resistance load)
允许操作速度 Operation speed		0.1mm-1m/秒(按钮型 button type)
允许通断频率 On-off frequency	机械性 Mechanical	400次operations/分钟min
	电气性 Electrical	30次operations/分钟min
绝缘电阻 Insulation resistance		100MΩ以上min. (DC500V绝缘电阻计检测 tested by 500VDC insulation ohmer)
接触电阻(初始值) Contact resistance(initial value)		OF1.47N型 30mΩ以下; OF0.49N型 50mΩ以下 / OF1.47N type under 30mΩ, OF0.49N type under 50mΩ
耐振动性 Vibration 误动作 False action		10-55Hz双振幅1.5mm(触点离开1ms以下) / 10-55Hz, 1.5mm double amplitude (contact left is under 1ms)
耐冲击性 Shock-resistant		OF1.47N型 最大300m/s ² ; OF0.49N型 最大200m/s ² / OF 1.47N type max.300m/s ² ; OF 0.49N type max.200m/s ²
寿命 Life	机械寿命 Mechanical	100万次以上 (60次/分钟) / 1,000,000 operations min(60 operations/30 /min)
	电气寿命 Electrical	10A, 5万次以上; 5A, 3A, 20万次以上 (30次/分钟) 10A, 50,000 operations/min; 5A, 3A, 200,000 operations/min(30 operations/min)
使用环境温度、湿度 Ambient temperature and humidity		-25~+85℃(不结冰、不凝露 without frozen and dew) 85%RH以下 under (+5~35℃)
耐冲击电压 Voltage-withstanding		非连接端子之间: AC1, 000V 50/60Hz 1分钟
		各端子与接地间, 在无电压金属件与各端子之间: AC1, 500V 50/60Hz 1分钟
		Non-connected terminal: AC1, 000V 50/60Hz 1 min No-voltage metal part and terminal: Ground and terminal: AC1, 500V 50/60Hz 1min

注意事项 Points to note

关于安装

用M2.3螺丝进行安装时, 请使用垫圈及弹簧垫圈等以保持固定安装。此时的转矩以2-2.5kgfcm(0.20-0.25N.m)为宜。

About installation

When mounting with M2.3 screws, use round washers, spring washers, etc., to maintain fixed installation. At this time, the torque should be 2-2.5kgfcm(0.20-0.25N.m).

用途 Application

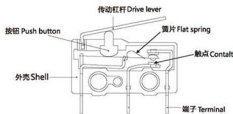
1、高容量的用途 High capacity purpose

△ 家用电器(取暖机、电热毯、电饭煲、电热水壶、烫斗、吸尘器等),
△ Household Appliances(warmer, electric blanket, rice cooker, electric kettle, iron, cleaner and etc.)

2、寿命长的用途 Long life purpose

△ 办公设备(复印件、打印机、传真机)、自动售货机、测量仪器、音响设备等。
△ Office Appliances(duplicator, printer, electrograph) automata, surveying instruments, sound equipment and etc.

产品结构图 Product structure



接触形式 Contact type

切换型 Change



常开型 Open



常闭型 Close



注意事项 Points to note

在安装导线端子，要迅速完成焊接作业。最好以容量60W的烙铁在3秒以内完成焊接。瓦特数过大以及长时间过热都有可能引起开关特性劣化。

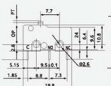
绝缘板安装时，确定开关主体与安装板之间的绝缘距离之后，在绝缘距离不足的情况下，请安装绝缘片或者隔板。特别是将微动开关安装在金属性物体上时，一定要使用绝缘片或者隔板。

When installing wire terminals, complete the welding job quickly. It is best to finish the welding within 3 seconds with a soldering iron with a capacity of 60W. Excessive wattage and prolonged overheating may cause the deterioration of switching characteristics.

Insulating board During installation, determine the insulation distance between the switch body and the mounting plate. If the insulation distance is insufficient, install insulation sheets or partitions. Especially when the micro switch is installed on the gold attribute object, one Always use insulation sheets or partitions.

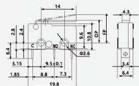
图片展示 Pictures

按钮型
button type



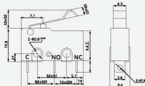
RS-5G

杆杠型
Lever type



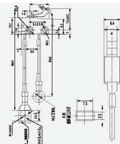
RS-5GL

弧形杆杠
Curved lever type



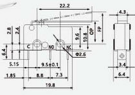
RS-5GL13

弧形杆杠
Curved lever type



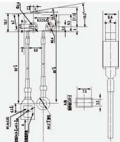
RS-3ZB-05

长杠杆型
Long lever type



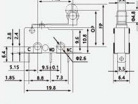
RS-5GL12

杠杆型
Lever type



RS-3ZB-02

滚轮杠杆型
Roller lever type



RS-5GL25

弧形杠杆型
Curved lever type



RS-3ZB-16

RD2FW IP67防水系列

RD2FW Series IP67 Waterproof switch

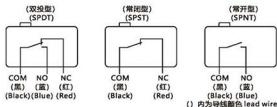
适合汽车、工业车辆的机械检测的防浸型 (符合IP67)
This type is suitable for mechanical testing of automobiles and industrial vehicles and meet to IP67
(尺寸单位Size Unit : mm)



(手柄型 Lever Type)

使用M4螺钉实现一点安装。
采用了能适应恶劣环境的强力固定式叶型摆杆。
充分考虑环保, 导线安装部位也实现无铅化。
It adopt M4 Screw to realize Single-point mounting
Incorporates a fixed leaf lever for tough environments
Molded lead wires are installed using lead-free connection for environmental conservation

接触规格 Contact specifications



额定值 Ratings

额定电压 Rating voltage	型号Model	RD2FW-G系列 Series
DC30V		额定负载 Resistance load 1A

注:上述额定值是在下面条件下测得的数据。
Note: The above rating values apply under the following test conditions
(1) 环境温度: 20±2℃ Ambient operating temperature: 20±2℃
(2) 环境湿度: 65±5%RH Ambient operating humidity: 65±5%RH
(3) 操作频率: 30次/min Operating frequency: 30 operations/min

接点规格 Model Designations

项目 Item	型号Model	RD2FW-G系列 Series
规格 Specifications		摆杆 Lever
接触点 Contact	材质 Material	合金 Billon
	间隙 (标准值) Gap (standard value)	0.25mm
最小适用负载 (参考值) * Min. applicable load (reference value)		DC5V 100mA

*关于最小适用负载, 请参考【请正确使用】的【关于微小负载型中的使用】。
*For min. applicable load, please refer to "using Micro loads" in "Precautions" for more

性能 Performance

项目 Item	型号Model	RD2FW-G
容许操作速度 Permissible operating speed		1mm~5mm/s
容许操作频率 Permissible operating frequency	机械 Mechanical	120次/min 120 operations/min
	电气 Electrical	30次/min 30 operations/min
绝缘电阻 Insulation resistance		100MΩ以上, 1min. (DC500V绝缘电阻计 with insulation tester)
接触电阻 (初期值) Contact resistance (initial value)		100mΩ以下 max.
耐电压 Dielectric strength	同极端子间 Between terminals of the same polarity	AC600V 50/60Hz 1min
	带电金属部与地之间 Between current-carrying metal parts and ground	AC1,500V 50/60Hz 1min
	各端子和非带电金属部之间 Between each terminal and non-current-carrying metal parts	AC1,500V 50/60Hz 1min
振动*1 1 Vibration resistance	误动作 Malfunction	频率 10~55Hz 双振幅 1.5mm 10 to 55 HZ, 1.5mm double amplitude
	冲击*1 1 Shock resistance	误动作 Malfunction
寿命*2 2 Life	机械 Mechanical	30万次以上 operations min. (60次 operations/min)
	电气 Electrical	3万次以上 operations min. (20次 operations/min)
保护结构 Degree of protection		IEC IP67
使用环境温度 Ambient operating temperature		-40~+85℃ 60%RH以下 RH max. (无结冰, 无凝露 with no icing or condensation)
使用环境温度度 Ambient operating humidity:		95%RH以下 max. (+5~+35℃ 时 for)
重量 Weight		约 Approx. 10.4g (1个 type)

注:上述数值为初始值。

*1.在针状按钮型中为自由位置和总行程位置的数值, 摆杆型时是总行程位置上的数值, 接点的闭路或开路在1ms以内。

*2.有关试验条件请另行查询。

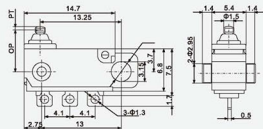
Note: the data given above are initial values.

*1. The values are at the free position and the total travel position values for PIN plunger, and total travel position value for lever, Close or open circuit of the contact is 1ms max

2. For testing conditions, please contact our sales department

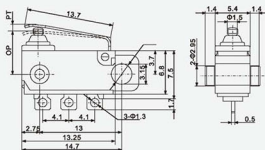
RD2FW-G

型号Model	RD2FW-G
OF Max(N)	1.30
RF Min(N)	0.13
OT MIN(mm)	0.8
MD Max(mm)	0.8
FP Max(mm)	0.2
OP(mm)	6.7±0.2



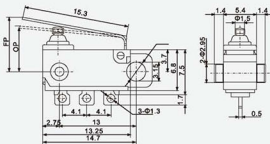
RD2FW-G01

型号Model	RD2FW-G01
OF Max(N)	2.20
RF Min(N)	0.30
OT MIN(mm)	0.8
MD Max(mm)	0.5
FP Max(mm)	9.4
OP(mm)	7.1±0.5



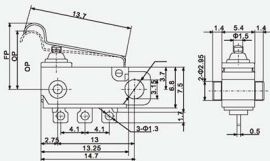
RD2FW-G02

型号Model	RD2FW-G02
OF Max(N)	1.95
RF Min(N)	0.25
OT MIN(mm)	1.35
MD Max(mm)	0.6
FP Max(mm)	10.5
OP(mm)	7.4±0.6



RD2FW-G03

型号Model	RD2FW-G03
OF Max(N)	1.80
RF Min(N)	0.20
OT MIN(mm)	1.5
MD Max(mm)	0.7
FP Max(mm)	13.5
OP(mm)	10.7±0.7



RV 系列微动开关

RV Series Micro Switch

追求可靠性, 安全性的小型基本开关

Seeking reliability and safety Minitype Switch

(尺寸单位Size Unit : mm)



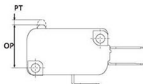
(按钮型 Button type)

特点 Characteristic

1. 动作位置精度高 High precision of action seat

△动作位置(OP)14.7±0.4mm, 动作前移动(PT)不超过1.2mm(以按钮型为例的数值).

△Action seat (OP) 14.7±0.4mm, pre-travel (PT) max. is 1.2mm (button type as example value)



2. 抗冲击性好 High shock resistance

△抗冲击性: 最大1000/s²

△对于强烈冲击, 本机框已有阻止设计, 可防止因强烈冲击而造成开关内部金属配件的松动.

△Shock resistance Max.1000/s²

△We had designed in preventing metal parts release when meeting strong shock.

3. 耐热性好 High heat-resistant

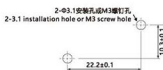
△最高使用温度: T105°C

△可定制T150°C以内的开关

△Max temperature: T105°C

△Can order the switch's temperature under in T150°C

安装孔加工尺寸 Installation hole dimension (mm)



4. 品种丰富, 充分满足选用要求, 可定制特殊开关 Rich in types and all kinds are available

△ 电流规格丰富, 从1A-21A尽取所需(银触点, 银合金触点, 镀银触点)

△ 传动形式多样, 能满足不同行程和动作力的设计, 还可以根据客户要求制作特殊的传动杆或传动装置.

△ 接触形式

△Rich in current types rank from 1A to 21A (silver contact, Ag alloy contact and silver plated by gold contact)

△Many kinds of drive types according to different design in limit and action power, can be made according to customer's special requirement.

△ Contact Type



△ 端子规格齐全, 多种接线方式。(见附表1: 端子的种类和规格)

△ 备有端子连接器供选择使用.

△ Many kinds of wiring ways bcz of all specifications of terminal (see attached chart 1: terminal's types and specification)

△ Different terminal /connector for choosing



△ 多种动作压力(OFF)自由选择, 可定制客户指定的动作力范围的开关.

△ Many kinds of action pressure (OF) for choosing and also can making according to customer's require the operating force range.



5. 高强度外壳 High Strength shell

△ 安装开关时, 塑料外壳能承受6kgf.cm的扭矩而不会破裂.

△ The plastic shell can stand 6KGF.CM torque when installing

6. 国内、国际认证 Certificate: CCC, CE

7. 符合RoHS指令 Meet the RoHS directive

传动形式 Drive Type	按钮型 button type	短杠杆型 Short lever type	杠杆型 Lever type	长杠杆型 Long lever type	弧形杠杆型 Curved lever type	滚轮短杠杆型 Short roller lever type	滚轮杠杆型 Roller lever type
示意图 Schematic diagram							

额定值及性能概述 Rated value and performance

项目 Item	分类 Type	RV-21 RV-16 RV-11	RV-3
允许操作速度 Operation speed		0.1mm~1m秒(按钮型) 0.1mm-1m/s(button type)	
允许通断频率 Action frequency		机械性:600次/分钟 Mechanical:600 operations/min	电气性:30次/分钟 Electrical:30 operations/min
绝缘电阻 Insulation resistance		100MΩ以上(用DC500V绝缘电阻计检测) 100MΩ min. (tested by 500VDC insulation ohmer)	
接触电阻(初始值) Contact resistance(initial value)		最大15mΩ 15mΩ Max.	最大30mΩ 30mΩ Max.
耐冲击电压 Voltage-withstanding	非连接端子间 Non-connected and terminal	AC1, 000V 50/60Hz 1分钟(min)	
	无电压金属件与各端子之间 No-voltage metal part and terminal		
	接地于各端子之间 Ground and terminal	AC2, 000V 50/60Hz 1分钟(min)	
耐振性(按钮型) Vibration(button type)	误动作 False action	双振幅1.5mm 10~55Hz(触点开离为1ms以下) 10-55HZ,1.5mm double amplitude	
耐冲击性(按钮型) Shock(button type)		OF 0.49N型: 98m/s ² 以下 OF 1.96N型, 3.92N型: 294m/s ² 以下 OF 0.98N型: 196m/s ² 以下 (触点开离为1ms以下) OF 0.49N type: under 98m/s ² OF 1.96N type, 3.92N type: under 294m/s ² OF 0.98N type: under 196m/s ² (contact left is under 1ms)	
寿命 Life	机械寿命(额定行程OT) Mechanical	100万次以上(通断频率60次/分钟) 1,000,000 operations min	
	电气寿命(额定负载) Electrical	10万次以上(通断频率60次/分钟) 100,000 operations min	30万次以上(通断频率20次/分钟) 300,000 operations min
使用环境温度、湿度 Ambient temperature and humidity		-25°C~+80°C(应无冻冰、凝露), 在85%RH以下(+5~35°C左右) -25°C~+80°C(without frozen and dew), under 85%(about +5~35°C)	
重量 Weight		约6.2g(按钮型) About 6.2g(button type)	

※注: 开关操作伴随有低速、高速和冲击, 或在高温多湿环境下使用时, 寿命及性能可能会因负载容量而显著降低, 因此敬请咨询。

Note: When does the switch work in low speed, high speed, shock or high temperature and heavy humidity, the life of switch will down bcz the loading. This picture just for customer's references, please inquiry for details when ordering.

注意事项 Points to note
安装

安装开关时, 使用大小适中的螺丝刀以适当的转矩(4-6kgfcm (0.39-0.59N-m))旋紧。(安装螺丝为两支M3螺丝)

在端子上安装导线时, 焊接作业应迅速, 烙铁的容量以60W以下为宜, 并在3秒以烙铁的容量以60W以下为宜, 并在3秒以内完成焊接。焊接时瓦数过大, 加热过长, 将会使开关特性劣化。

操作

使用按钮型时, 应将按钮的行程和操作体的行程调整在一条垂直线上。设定开关行程时, 以动作后达规格OT(min最小值表示)的60-90%为宜。

绝缘板

安装时, 应确认开关主体和安装板之间的绝缘距离是否适当。若绝缘距离不足, 应加入绝缘隔板或隔板。尤其是在金属体上安装微动开关时, 务必使用绝缘隔板或隔板。

环境

恶劣的保存、使用环境会影响开关的接点和外壳的性能。所以开关应保存在防潮湿、多尘、有腐蚀性气体的环境使用时, 建议选用密封型开关。

Installation

When installing the switch, use a medium-sized screwdriver and tighten it with an appropriate torque (4-6 kgfcm (0.39-0.59 N-m)). (Two M3 screws are used for installation.)

When installing the wire on the terminal, the soldering operation should be quick. The capacity of the soldering iron should be 60W or less, and the soldering should be completed within 3 seconds. If the wattage is too high or the heating time is too long during soldering, the switch characteristics will deteriorate. Operation

When using the button type, the stroke of the button and the stroke of the operating body should be adjusted on the same vertical line.

When setting the switch stroke, it is advisable to set it at 60-90% of the specified OT (minimum value indicated) after the action.

Insulating plate

When installing, it is necessary to confirm whether the insulating distance between the switch body and the mounting plate is appropriate. If the insulating distance is insufficient, an insulating guide plate or insulating partition should be added. Especially when installing a microswitch on a metal body, it is essential to use an insulating guide plate or insulating partition.

Environment

Poor storage and usage conditions can affect the performance of the contacts and the casing of the switch. Therefore, when storing switches, they should be kept in a dry, dust-free and non-corrosive gas environment. When in use, it is recommended to choose sealed switches.

图片展示 Pictures Pictures

常开型 N.O type  RV-16-3C25	常闭型 N.C type  RV-16-2C25	按钮型 Button type  RV-16-1C25	短杠杆型 Short lever type  RV-161-1C25
中杠杆型 Middle lever type  RV-162-1C25	长杠杆型 Long lever type  RV-163-1C25	弧形杠杆型 Curved lever type  RV-164-1C25	滚轮短杠杆型 Short roller lever type  可定制金属滚轮 Can making with metal roller RV-165-1C25
滚轮长杠杆型 Long Roller lever type  可定制金属滚轮 Can making with metal roller RV-166-1C25	螺钉端子型 Screw terminal type  RV-16-1B5	#6-3宽端子型 Wide terminal type  RV-16-1C5	焊接端子型 Weld terminal type  RV-16-1E5
带隔板型 Clapboard type  RV-16-1C2R5	耐高温型 High temprature resistant type  RV16-1C25-P	 1P65	 RV10-11A
面板安装按钮型 Panel installation type  RVAQ	外装杠杆滚轮型 Roller lever outside type  RVAL2	外装杠杆滚轮型(OP大) Roller lever outside type(OP big)  RVAL3	外装弧形杠杆型 Curved lever outside type  RVAL4

※注：本图册仅以16A电流规格、4.8#插销端子规格(C2)、1.96N压力规格为例展示图片和型号，21A、11A、3A等电流规格的开关外形完全相同，不再重复示图。客户订购时请说明电流规格、端子规格和操动压力等情况，以保证正确购买。

※Note: The display pictures and model as examples by 16A current,4.8bolt terminal and 1.96N pressure specification.The shape of 21A,11A and 3A switch is different.Pls explain the current specification,terminal specification, operation pressure and so on This picture just for customer' s references ,please inquiry for details when ordering.

RZ 系列微动开关

RZ Series Micro Switch

高精度和丰富品种著称最畅销的基本型开关
The most popular switch in high precision and rich types Reverse

(尺寸单位Size Unit : mm)



(针状按钮型 Needle button type)

3、传动形式丰富，可依据客户要求定制传动杠杆或传动装置。
Rich in drive types, can making the drive lever and gearing according to customer's require

4、M4螺钉端子备有防滑齿垫(-B3)、杯口垫圈(-B)弹垫圈(-B5)等垫圈型，规格可供选择，使接线更加方便。
Screw terminals with anti-slip teeth mat, cup washers, spring washers and other washer types, all kinds of forms to choose from, to make wiring easier.

5、备有多种端子保护和防耀/静电屏蔽防护罩可供选择，使安全更有保障。
Protection covers a wide range of terminals and the explosion-proof / static shielding enclosures to choose, for more reliable security

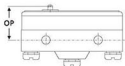
特点 Characteristic

1、额定电流开闭容量为15A
Rated current capacity of opening and closing is 15A

15A 125, 250VAC, 1/8HP 125VAC, 1/4HP 250VAC
1/2A 125VDC, 1/4A 250VDC

2、高精度、长寿命 High precision and long life

△ 动作位置(OP)精度高达±0.4mm(针状按钮型数值)
△ Action seat(OP) precision reach 0.4mm (needle button type's value)



△ 机械寿命: 200万以上
△ Machinery life: more than 2,000,000 operation

接触形式 Contact type



注：逆动作型(RZ-15GM□)的NO与NC是相反
Note: NO is the opposite to NC

6、已通过CCC, CE认证
Certificate: CCC, CE

7、符合RoHS指令
Meet the RoHS directive

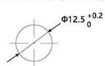
传动形式 Drive types	针状按钮型 Needle button type	塞柱短接按钮型 Fine plug column button type	塞柱短接按钮型 Short plug column button type	面板安装式塞柱型 Panel installation of plug column type	面板安装式滚轮柱型 Panel installation of roller plug column type	簧片杠杆型 Flat spring lever type	簧片滚轮杠杆型 Flat spring roller lever type
示意图 Schematic diagram							
传动形式 Drive types	杠杆型 Lever type	滚轮杠杆型 Lever type roller lever type	单方向动作滚轮杠杆型 One-way action roller lever type	反向动作滚轮杠杆型 Reverse Action roller lever type	反向动作滚轮杠杆型 Reverse Action roller lever type	弹簧软杆型 Spring Soft rod type	
示意图 Schematic diagram							

安装孔加工尺寸 Installation hole processing dimension (mm)



△ 面板安装型加工尺寸
△ Panel installation type of processing dimension

面板安装式塞柱型 Panel installation plug column type
面板安装式滚轮塞柱型 Panel installation roller plug type



产品型号说明 Model description



注Note 1: 触点间距Contact spacing

- H: 0.25mm(高灵敏 微小负载用)
0.25mm(use for high-sensitivity micro-load)
- G: 0.5mm(标准standard)
- G: 1mm(高容量high capacity)
- E: 1.8mm(高容量high capacity)

注Note 3: 端子种类Terminal type

- B: 杯口垫圈螺钉端子cup washers screw terminal
- B3: 防滑内边垫圈螺钉端子anti-slip teeth mat screw terminal
- B5: 弹簧垫圈螺钉端子spring washers screw terminal

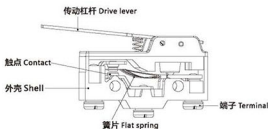
注Note 2: 传动形式Drive form

- 无表示No indicated: 针状按钮Needle button type
- S: 塞柱短按钮Fine plug column button type
 - D: 塞柱短按钮short plug column button type
 - Q: 面板安装式塞柱型panel installation of plug column type
 - Q8: 面板安装式长塞柱型panel installation of long plug column type
 - Q22: 面板安装式滚轮塞柱型panel installation of roller plug column type
 - Q21: 面板安装式交叉滚轮塞柱型
Panel installation of cross roller pulg column type
 - W54: 交叉滚轮杠杆型Cross roller lever type
 - W225: 金属滚轮短杠杆型Metal roller lever type
 - L: 簧片杠杆型Flat spring lever type
 - L2: 簧片滚轮杠杆型Flat spring roller lever type
 - W21: 短杠杆型Short lever type

W: 杠杆型Lever type

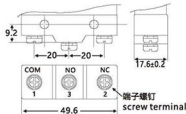
- W24: **微量动作杠杆型Micro action lever type
 - W78: **微量动作钢丝绳杠杆型(OF小)
Micro action wire lever type(OF small)
 - W52: **微量动作钢丝绳杠杆型(OF大)
Micro action wire lever type(OF big)
 - W22: 滚轮短杠杆型Roller short lever type
 - W2: 滚轮杠杆型Roller short lever type
 - W49: 交叉滚轮短杠杆型Cross roller short lever
 - W25: 金属滚轮杠杆型Metal roller lever
 - W25: φ20大个滚轮短杠杆型φ20 dia roller short lever
 - W2277: 单方向动作滚轮杠杆型one-way action roller lever type
 - R: *反向动作杠杆型Reverse Action lever type
- 注: *只适用于Z15-G型的种类just for Z15-G type
**只适用于15-H型的种类just for 15-H type

产品结构图 Product structure



接线部位尺寸 Wiring area size

- △ 防滑齿垫(B3)型(另有杯口垫圈、弹簧垫圈)
 △ Anti-slip teeth mat(B3) type (others are cup washers and spring washers)



额定值及性能概述 Rated value and performance

项目 Item	分类 Type	一般型 General type	弹簧软杆型 Soft flat spring lever type
允许操作速度 Operation speed		0.1mm~1m/秒(针状按钮型) 0.1mm-1m/s(needle button type)	1mm~1m/秒
允许通断频率 Action frequency	机械性 Mechanical	240次/分钟 240 operations/min	120次/分钟 120 operations/min
	电气性 Electrical	20次/分钟 20 operations/min	
绝缘电阻 Insulation resistance		100MΩ以上(用DC500V绝缘电阻计检测) 100MΩ min. (tested by 500VDC insulation ohmer)	
接触电阻(初始值) Contact resistance(initial value)		最大15mΩ 15mΩ Max	
耐击穿电压 Voltage-withstanding		非连接端子间 Non-connected and terminal 触点间距 Contact spacing G AC1, 000V 50/60Hz 1分钟/min 触点间距 Contact spacing H AC600V 50/60Hz 1分钟/min 触点间距 Contact spacing F,E AC1,500V 50/60Hz 1分钟/min	非连接端子间 Non-connected and terminal 触点间距 Contact spacing G AC1,000V 50/60Hz 1分钟/min 触点间距 Contact spacing H AC600V 50/60Hz 1分钟/min
		无电压金属片与各端子之间, 接地于各端子之间为AC2, 000V 50/60Hz 1分钟 Ground No-voltage metal part and terminal AC2,000V 50/60Hz 1min	
颤振性(针状按钮型) Vibration(needle type)	误动作 False action	双振幅1.5mm 10~55Hz(触点开离为1ms以下) 10-55Hz, 1.5mm double amplitude (contact left is under 1ms)	
耐冲击性 Shock resistance	针状按钮型 Needle button type	最大300m/S ² (触点开离为1ms以下) Max.300m/S ² (contact left is under 1ms)	
	其它型 Other type	最大50m/S ² (触点开离为1ms以下) Max.50m/S ² (contact left is under 1ms)	
寿命 Life	机械寿命 Mechanical	200万次以上(通断频率60次/分钟)(规定超程OT) 2,000,000 operations min(on-off frequency 60 operations/min)(overtravel OT)	
	电气寿命(阻性负载) Electrical resistance carry)	50万次以上operations min. (20次operations/min)	
使用环境温度、湿度 Ambient temperature and humidity		-25℃~+80℃(应无冻冰、凝露)在85%RH以下(+5~35℃左右) -25℃~+80℃(without frozen and dew), under 85%(about +5~35℃)	
触点材料 Contact material		AgNi合金; AgCdO合金(未在RoHS指令内) AgNi alloy; AgCdO alloy(Without meet the RoHS directive)	
重量 Weight		约 About 22~58g	约 About 42~48g

※注: 开关操作伴随有低速、高速和冲击, 或在高温多湿环境下使用时, 寿命及性能可能会因负载容量而显著降低, 因此敬请咨询
 ※Note: When the switch works in low speed, high speed, shock or high temperature and heavy humidity, the life of switch will down bcz the loading capacity.
 This picture just for customer's references, please inquiry for details when ordering.

图片展示 Pictures Pictures

针状按钮型

Needle button type



RZ-15G-B3

蘑菇细按钮型

Fine plug column button type



RZ-15GS-B3

蘑菇短按钮型

Short plug column button type



RZ-15GD-B3

蘑菇防溅按钮型

Plug-in splash-proof push-button type



RZ-15GD55-B3

面板安装式蘑菇柱型

Panel installation of plug column type



RZ-15GQ-B3

面板安装式滚轮蘑菇柱型

Panel installation of roller plug column type



RZ-15GQ22-B3

面板安装式交叉滚轮蘑菇柱型

Panel installation of cross roller plug column type



RZ-15GQ21-B3

面板安装式长蘑菇柱型

Panel installation of plug column type



RZ-15GQ8-B3

短杠杆型

Drive types



RZ-15GW21-B3

短杠杆型

Drive types



RZ-15GW-B3

加宽短杠杆型

Wide lever type



RZ-15GW-B3(K)

滚轮短杠杆型

Lever type roller lever type

铜轮 Copper roller



RZ-15GW225-B3

滚轮短杠杆型

Lever type roller lever type

铜轮 Copper roller



RZ-15GW25-B3

滚轮短杠杆型

Lever type roller lever type

铜轮 Copper roller



RZ-15GW22-B3

滚轮短杠杆型

Lever type roller lever type

塑料轮 Plastic roller



RZ-15GW2-B3

滚轮短杠杆型(38.5mm)

Roller lever type(38.5mm)



RZ-15GW235-B3

Φ20大滚轮短杠杆型

Φ20 Big roller lever



RZ-15GW25-B3

簧片短杠杆型

Flat spring lever type



RZ-15GL-B3

簧片滚轮短杠杆型

Flat spring roller lever type



RZ-15GL25-B3

交叉滚轮短杠杆型

Cross roller short lever



RZ-15GW495-B3

※注：本图份仅以触点间距规格，防滑齿垫圈型(-B3)展示，另有H、F、E触点规格和杯口垫圈型(-B)、弹垫圈型(-B5)等规格，规格可供选择。客户订购时请说明，以保证正确购买。

※Note: The display pictures and model is examples by contact spacing specification, anti-slip teeth mat type(B3 display,others with H,F,E contact specification and sup washers(-B) and spring washers(-B5) specification and so on.The specification can be chosen This picture just for customer's references ,please inquiry for details when ordering.

图片展示 Pictures

交叉滚轮杠杆型 Cross roller short lever  RZ-15GW545-B3	单向动作滚轮杠杆型 One-way action roller lever type  RZ-15GW22775-B3	钢丝杠杆型(63.5钢丝) Wire lever type (63.5wire)  RZ-15HW52-B3	钢丝杠杆型(110钢丝) Wire lever type (110wire)  RZ-15HW78-B3
微量动作杠杆型 Micro action lever type  RZ-15HW24-B3	反向动作杠杆型 Reverse action lever type  RZ-15GR-B3	杠杆带簧片型 Flat spring lever type  RZ-15GW-B3(3孔)	面板安装式蘑菇柱型 Panel installation of plug column type  RZ-15GD(T)-B3
拨斗开关型(红) Iron switch (red) type  TD10	保护罩 Protective cover  AP-A	保护罩 Protective cover  AP-B	保护罩 Protective cover  AP-C

注意事项 Points to note

关于安装

安装时用M4螺丝时，请使用圆垫圈及弹簧垫圈等进行固定安装。此时的转矩约为12~15kgf·cm(1.18~1.47N·m)
 焊接导线时，烙铁要在容量60W以下，时间5秒以内，迅速完成焊接，负载过大以及长时间的过热，都有可能导致开关特性劣化。
 导线安装于螺丝紧固端子上的转矩以8~12kgf·cm(0.78~1.18N·m)为宜。

面板安装型注意事项

面板安装式按钮型采用侧面螺丝安装固定时，应避免冲击性操作。尤其复位时若有冲击性操作会损坏开关，应予以注意。
 安装面板时，传动轴的六角螺母转矩应在50kgfcm(4.9N.m)以下。
 面板安装式按钮采用侧面螺丝安装固定时，凸爪角、操作速度过大则有损坏开关的可能，请注意。
 采用面板安装式时，操作速度或动作后移动过大，会损坏开关，安装时应予以注意。
 面板安装式按钮采用侧面螺丝安装时，请拆除传动轴部分的六角螺母。
 安装孔的加工方法面板安装式按钮型。面板安装式滚轮按钮型。

About installation

When M4 screws are used, use round washers or spring washers. The torque at this time is about 12~15kgf·cm(1.18~1.47N.m).
 When welding wire, the soldering iron should be under 60W capacity and within 5 seconds, and the welding should be completed quickly.
 Excessive wattage and long-term overheating may make the switching characteristics deteriorate.
 The torque of the wire installed on the screw fastening terminal should be 8~12kgf·cm(0.78~1.18N.m).

Precautions for panel installation

When the panel mounted button type is fixed with side screws, impact operation should be avoided. In particular, if the impact operation will damage the switch, attention should be paid to it.
 When mounting the panel, the torque of the hexagon nut of the drive shaft shall be below 50kgfcm(4.9N.m).
 When the panel mounted button is fixed with side screws, the convex claw Angle and operating speed are too large, and the switch may be damaged. Please note that.
 When the panel mounted type is used, the operating speed or the movement after the operation is too large, the switch will be damaged, and should be paid attention to during installation.
 If panel mounted buttons are mounted with side screws, remove the hexagon nuts on the drive shaft.
 Machining method of mounting hole panel mounting push-button type. Panel mounted roller push-button type.

RX 系列磁吹微动开关

RX Series Micro Switch

内置了磁吹熄弧机构的直流电流专用开关
DC Circuit Switch with built-in Magnetic Blow-out

- *为了在接点机构中有效使用磁吹熄弧,内置了永久磁铁。
- *形状、安装方法等与RX型一般用基本开关相同的紧凑型尺寸。
- *It has a built-in permanent magnet to extinguish the arc at higher DC load.
- *The shape, Installation type are same as the RX-type basic switch.



(滚珠摆杆型 Roller Leaf spring)

型号说明 Model Designations



- ① 电流额定值 Rated working current
10 : 10A [DC125V]
- ② 接点间距 Contact gap
G : 0.9mm
- ③ 驱动杆的种类 Actuator
无标记: 针状按钮 Unmarked: Pin plunger type
D : 弹簧短按钮 Short spring plunger
S : 弹簧细按钮 Slim spring plunger
Q : 面板安装式滚珠型 Panel mount plunger
Q21 : 面板安装横向滚珠按钮型 Panel mount cross roller plunger
Q22 : 面板安装式滚珠按钮型 Panel mount roller plunger
L : 板簧型 Leaf spring
W : 摆杆型 Hinge lever
W2 : 滚珠摆杆型 Roller hinge lever
W21 : 短摆杆型 Short hinge lever
W22 : 滚珠短摆杆型 Short hinge roller lever
W4 : 小型摆杆型 Low-force hinge lever
M : 反向动作摆杆型 Reverse hinge lever
M2 : 反向动作滚珠摆杆型 Reverse hinge roller lever
M22 : 反向动作滚珠短摆杆型 Reverse short hinge roller lever
- ④ 端子的种类 Terminal type
无标记: 焊接端子 Unmarked: Welding terminal
B : 螺钉紧固端子 (内置垫圈)
Screw type terminal within internal teeth washers

种类 Ordering Information

驱动杆的种类 Actuator	端子的种类 Terminal type	焊接端子 Welding terminal		螺钉紧固端子 (-B) Screw Terminals	
		型号 type	型号 type	型号 type	型号 type
针状按钮型 Unmarked: Pin plunger type		RX-10G		RX-10G-B	
弹簧短按钮型 Slim spring plunger		RX-10GS		RX-10GS-B	
弹簧短按钮型 Short spring plunger		RX-10GD		RX-10GD-B	
面板安装按钮型 Panel mount plunger		RX-10GQ		RX-10GQ-B	
面板安装滚珠按钮型 Panel mount roller plunger		RX-10GQ22		RX-10GQ22-B	
面板安装横向滚珠按钮型 Panel mount cross roller plunger		RX-10GQ21		RX-10GQ21-B	
板簧型 Leaf spring		RX-10GL		RX-10GL-B	
短摆杆型 Short hinge lever		RX-10GW21		RX-10GW21-B	
摆杆型 Hinge lever		RX-10GW		RX-10GW-B	
小型摆杆型 Low-force hinge lever		RX-10GW4		RX-10GW4-B	
滚珠短摆杆型 Short hinge roller lever		RX-10GW22		RX-10GW22-B	
滚珠摆杆型 Roller hinge lever		RX-10GW2		RX-10GW2-B	
反向动作摆杆型 Reverse hinge lever		RX-10GM		RX-10GM-B	
反向动作滚珠短摆杆型* Reverse hinge roller lever		RX-10GM22		RX-10GM22-B	
反向动作滚珠摆杆型* Reverse short hinge roller lever		RX-10GM2		RX-10GM2-B	

*所谓的反向动作,是指通过压缩弹簧使按钮处于通常按下状态,由摆杆的操作而进行的反转动作。

*Reverse action, it means reverse action of operation of lever when the button is in the normal pressed state via compressing the coil spring

额定值/性能 Rated value/specification

额定电压 (V) Rated Voltage (V)	非感性负载 (A) Non-Inductive load(A)				感性负载 (A) Inductive load (A)			
	阻性负载 Resistive load		电灯负载 Lamp load		感性负载 Inductive load		电动机负载 Motor load	
	常闭 NC	常开 NO	常闭 NC	常开 NO	常闭 NC	常开 NO	常闭 NC	常开 NO
DC	8	10	3	1.5	10	10	5	2.5
	14	10	3	1.5	10	10	5	2.5
	30	10	3	1.5	10	10	5	2.5
	125	10	3	1.5	7.5	6	5	2.5
	250	3	1.5	0.75	2	1.5	2	1.5

注1.上述数值表示稳定电流。

注2.所谓感性负载,就是功率因数为0.4以上(交流)、时间常数7ms以下(直流)的负载。

注3.所谓电灯负载,就是有10倍的浪涌电流的负载。

注4.所谓电动机负载,就是有6倍的浪涌电流的负载。

注5.交流时也可在与上述相同的额定值下使用。

注6.反动作时(X-10GM=)时,常闭和常开相反。

注7.上述额定值是在下面的条件下试验得到的数值。

- (1) 环境温度: 20±2℃
- (2) 环境湿度: 65±25%RH
- (3) 操作频率: 20次/min

※注: 个别的认证编号请咨询本公司 Please contact us for information on certified

Note 1: The above figure means steady current

Note 2: Inductive load ,it means the power factor is over 0.4 and time constant is under 70ms

Note 3: Lamp load is a load with 10 times surge current.

Note 4: Motor load is a load with 6 times surge current.

Note 5: The above data also applies to the AC load

Note 6: for reverse action, NC is the opposite of NO

Note 7: The above rated data is obtained under the following conditions

- (1) Ambient working temperature: 20±2℃
- (2) Ambient working humidity: 65±25%RH
- (3) Operating frequency: 20 operations/min

额定值 Rated value

额定电压Rated voltage	型号Model
DC125V	RX-10G 10A
DC250V	3A

EN/(CE)···适合认证Certification

额定电压Rated voltage	型号Model
DC125V	RX-10 10A

性能 Specification

容许操作速度Allowable Operating speed	0.1mm~1m/s *1	
容许操作频率 Allowable Operating frequency	机械Mechanical	240次/min 40 operations/min
	电气Electrical	20次/min 20operations/min
绝缘电阻 Insulation resistance	100MΩ以上 (DC500V兆欧表) 100MΩ min.(at 50VDC)	
接触电阻 Contact resistance	15mΩ以下 (初期值) 15mΩ max.(initial value)	
耐压Withstand voltage	极端子之间、带电金属部与地线之间、各端子与不带电金属部之间AC1500V 50/60HZ 1min Between contacts of some polarity,between current-carrying metal parts and ground between each terminal and non-current-carrying metal parts AC1.500V 50/60HZ 1min	
振动Vibration	误动作Malfunction	10~55Hz 双振幅1.5mm *2
	耐久Durability	最大1,000m/s ²
冲击Shock resistance	误动作Malfunction	最大300m/s ² *1 *2
	机械Mechanical	100万次以上 1,000,000 operations min.
寿命 Life	机械Mechanical	100万次以上 1,000,000 operations min.
	电气Electrical	10万次以上 100,000 operations min.
保护结构Degree of Protection	IP40	
防触电保护等级Degree of protection against electric shock	Class I	
PTI (漏电流特性) Proof tracking index	175	
使用环境温度Ambient operating temperature	-25~+80℃ (不结冰) -25 to 80℃ (with no icing)	
使用环境湿度Ambient operating humidity	35~85%RH	
重量Weight	约27~63g Weight: Approx. 22 to 58g	

*1.针状按钮型的情况下。(其他型号请另行咨询) 1. the values are for the Pin plunger.

*2.误动作在1ms以内。 2. Malfunction:1ms max.

结构 Structure

接触形式 (1c接触) Contact Form



注: 反向动作 (RX-10GMc) 时 NC和NO的端子配置相反

Note: The RX-10GM is a reversible model and the NO and NC positions are reversed

外形尺寸 Structure

安装孔加工尺寸

安装时使用M4螺钉, 用平垫圈、弹簧垫圈等牢固安装。

此时请使用1.18~1.47N·m的紧固转矩。
Use M4 screws with plane washers and spring washers to mount the switch. And tighten each mounting screw securely to a torque of 1.18 to 1.47N·m



接点规格 Contacts Specification

接点Contact	材质Material 间隔 (标准值) Contact gap (standard value)	银Silver 0.9mm
浪涌电流 Inrush current	常闭 NC 常开 NO	最大max.30A 最大max.15A

安装到面板上时, 请用2.94~4.9N·m的紧固转矩拧紧紧固杆的六角螺母。
When mounting the switch to panel, use a tightening torque of 2.94 to 4.9N·m for the hexagonal nuts on the actuator.

面板安装按钮型
Panel Mount plunger



面板安装滚珠按钮型
Panel Mount Roller Plunger

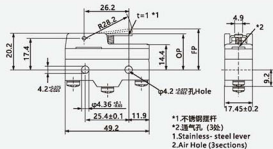


外形尺寸/动作特性 Dimensions and Operating Characteristics

短悬杆型 Short hinge lever



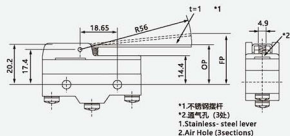
RX-10GW1-B



长悬杆型 Long pendulum type



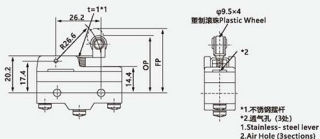
RX-10GW-B



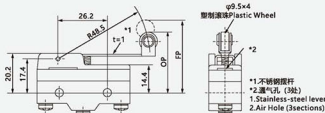
滚珠短悬杆型 Short Hinge Roller Lever



RX-10GW2-B

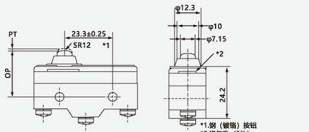


滚珠摆杆型 Roller Leaf spring

RX-10GW2-B


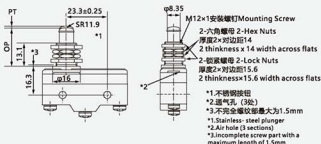
注: 请不要同时使用M12安装螺钉和外壳本体的安装孔, 可能导致开关本体的损坏。
 Note: Do not use the M12 mounting screw and the case mounting hole at the same time, or the case may be damaged.

弹簧短按钮型 Short Spring Plunger

RX-10GD-B


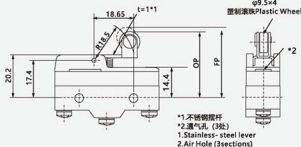
*1. 铬(镀) 按钮
 *2. 通气孔 (3处)
 *1. Chrome-plated steel plunger
 *2. Air Hole(3 sections)

面板安装按钮型 Panel Mount plunger

RX-10GQ-B


M12×1安装螺钉Mounting Screw
 2-六角螺母 2-Hex Nuts
 厚度2×对边距14
 2 thickness x 14 width across flats
 2-锁紧螺母 2-Lock Nuts
 厚度2×对边距15.6
 2 thickness×15.6 width across flats
 *1. 不锈钢按钮
 *2. 通气孔 (3处)
 *3. 不完全螺钉最大为1.5mm
 *1. Stainless-steel plunger
 *2. Air hole (3 sections)
 *3. Incomplete screw part with a maximum length of 1.5mm

反向动作滚珠摆杆型 Leaf Spring

RX-10GM22-B


*1. 不锈钢摆杆
 *2. 通气孔 (3处)
 *1. Stainless-steel lever
 *2. Air Hole (3 sections)

注: 上面各种的外形尺寸图中未注公差为±0.4mm, Note: Unmarked tolerance in the above outline sizes is (±0.4mm).

型号Model	RX-10GW21-B	RX-10GW-B	RX-10GW22-B	RX-10GW2-B	RX-10GD-B	RX-10GQ-B	RX-10GM22-B
动作特性 Operating Characteristics							
动作力 OF 最大 max.	2.45N	1.08N	2.16N	1.42N	5.00N	5.00N	6.86N
回复力 RF 最小 min.	0.31N	0.14N	0.34N	0.21N	1.12N	1.12N	1.52N
预行程 PT 最大 max.	-	-	-	-	0.9mm	0.9mm	-
过行程 OT 最小 min.	2.1mm	4.8mm	2.4mm	4mm	1.6mm	5.5mm	2mm
应差距离 MD 最大 max.	1.7mm	3.9mm	1.7mm	3mm	0.18mm	0.18mm	0.75mm
动作位置							
FP 最大 max.	25.5mm	34.6mm	37.1mm	40.5mm	-	-	36.1mm
OP	20.7±0.8mm	21.1±0.8mm	32.2±0.8mm	32.2±0.8mm	21.2±0.5mm	21.8±0.8mm	32.2±0.8mm

RDZ 系列双触点微动开关

RDZ Series Micro Switch

高精度和品种丰富的双触点微动开关
High precision and wide variety of double contact microswitches

(尺寸单位Size Unit : mm)



(滚珠短摆杆型 Roller Lever Type)

型号说明 Model description

RDZ-10 G □ -1 □
① ② ③ ④ ⑤

- ① 额定规格 Rated specification
10:10A (AC250V)
- ② 触点间隔 Contact interval
G: 0.5mm
- ③ 驱动杆 Drive rod
W: 摆杆型 W: Swing bar type
W2: 滚珠摆杆型 W2: Ball swing rod type
W22: 滚珠短摆杆型 W22: Ball bearing short swing rod type
- ④ 接触形式 Contact form
1: DPDT
- ⑤ 端子 Terminal
B: 螺钉紧固端子 B: Fasten the screw to the terminal

具体型号见下表:

	端子 Terminal	螺丝端子 (-B) Screw terminal (-B)
驱动杆 Drive rod		
摆杆型 Pendulum type		RDZ-10GW-1B
滚珠摆杆型 Ball pendulum rod type		RDZ-10GW2-1B
滚珠短摆杆型 Ball short pendulum rod type		RDZ-10GW22-1B

额定规格 Rated Specification

额定电压Rated voltage	非感性负载 (A) Non-inductive load (A)				感性负载 (A) Inductive load (A)			
	电阻负载 Resistance load		灯负载 Lamp load		感性负载 Inductive load		电动机负载 Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
AC125V	10		2	1		6	3	1.5
AC250V	10		1.5	0.7		4	2	1
DC8V	10		3	1.5		6	5	2.5
DC14V	10		3	1.5		6	5	2.5
DC30V	10		3	1.5		4	3	1.5
AC125V	0.5			0.5		0.05		0.05
DC250V	0.25			0.25		0.03		0.03

※注: 1. 上述数值表示稳定电流。

2. 所谓感性负载, 就是功率因数0.4以上(AC)、时间常数7ms以下(DC)的负载
3. 所谓灯负载, 就是有10倍的浪涌电流的负载。
4. 所谓电动机负载, 就是有6倍的浪涌电流的负载。
5. 额定规格在以下的条件下试验测得:

- (1) 环境温度: 20±2°C
- (2) 环境湿度: 65±5%RH
- (3) 容许操作频率: 20次/分钟

※Note: 1. The above values represent stable current.

2. The so-called inductive load, is the power factor of 0.4 above (AC), the time constant below 7ms (DC) load
3. The so-called lamp load is the load with 10 times the surge current.
4. The so-called motor load is the load with 6 times the surge current.
5. The rated specification shall be tested under the following conditions:

- (1) Ambient temperature :20±2°C
- (2) Ambient humidity: 65±5%RH
- (3) Permissible operating frequency :20 times/min

特性 Characteristics

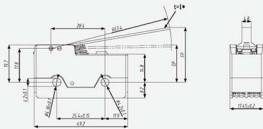
容许操作速度 Allowable operating speed		0.1mm~1m/s*
容许操作频率 Allowable operating frequency	机械 Machinery	240次/分钟 240 beats per minute
	电气 Electrical	20次/分钟 20 times per minute
绝缘电阻 Insulation resistance		100MΩ以上 (DC500V时) More than 100MΩ (DC500V)
接触电阻 Contact resistance		15mΩ一下 (初期值) 15mΩ once (initial value)
绝缘强度 Insulation strength		AC1,000V, 50/60Hz, 1分钟, 在分连续性端子之间
		AC1,000V, 50/60Hz, 1 minute, between the sub continuity terminals
耐冲击 Impact resistance	误动作 Misoperation	10~55Hz双振幅 10~55Hz double amplitude
	破坏 Destroy	1,000m/s以下 Under 1,000m/s squared
寿命 Life span	误动作 Misoperation	300m/s以下 *1*2 *1*2 below 300m/s ²
	机械 Machinery	100万次以上 More than 1,000,000 times
	电气 Electrical	10万次以上 More than 100,000 times
防护等级 Protection class		IP40
触电保护等级 Electric shock protection level		Class I
使用环境温度 Service ambient temperature		-25℃~80℃ (无结冰)
使用环境湿度 Ambient humidity		35%~85%RH -25℃~80℃ (no icing)

产品型号以及内部结构图(尺寸单位Size Unit : mm)

长摆杆型 Long pendulum type



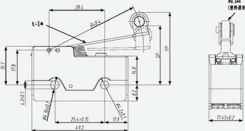
RDZ-10GW-1B



滚珠摆杆型 Roller Leaf spring



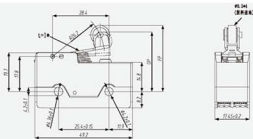
RDZ-10GW2-1B



滚珠短摆杆型 Short Hinge Roller Lever



RDZ-10GW22-1B



RA 系列封装微动开关 RA Series Package Micro Switch

经济且实用性高的封装限位开关
Economic and high practical seal limit switch
(尺寸单位Size Unit : mm)

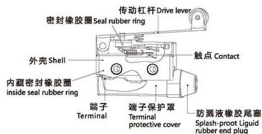


(滚轴短杆型 Roller short lever type)

接触形式 Contact type



产品构造图 Wiring area size



- Panel mounting roller plunger type is mounted on the panel when used because of operating speed and movement after movement. Too much will damage the switch, so be careful when installing.
- When the panel mounting type is installed and used with side screws, do not carry out impact operation, especially return. Please note that the impact operation will damage the drive shaft. When the panel mounting type is installed and fixed with side screws, it will be damaged due to the increase of jaw Angle and operating speed. Bad drive shaft, so be very careful.

Other matters needing attention

Do not use in water vapor in hot water (above 60°C). Because it is not a complete oil seal, please avoid using it directly in oil and water. According to environmental conditions, there is the choice of rubber pad, sealing rubber material is necessary (standard for oil resistant rubber). There are also other weather resistant, cold resistant and heat resistant rubber.

特点 Characteristic

1、长寿命 Long life

2、机械强度高、小巧、轻便

High mechanical strength, slight, soft

△ 安装孔间距为25.4mm，与RZ型微动开关相同。

△ installation hole spacing is 25.4mm, same as RZ type switch



△ 外壳采用有良好机械特性的塑料材料制成，能耐较大冲击。

△ Shell with good mechanical properties of plastic materials that can withstand the impact of large stock.

3、防尘和耐油的结构设计

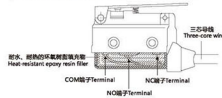
The structural design of dust-proof and oil-proof

△ 开关本体用被压缩的橡胶圈和隔膜进行密封，可保持IP64的密封等级。

△ 定制端子部分用环氧树脂进行密封的产品，但引出导线要选定。

△ Switch body adopt the compressed by the rubber seal rings and diaphragms, it will keep IP64 class

△ Can be customized terminal part of the epoxy resin to seal the product, but need choose the wire leads frist.



注意事项 Points to note

安装

安装时使用M4螺丝，使用垫圈和弹簧垫圈等使安装牢固。螺丝固定转矩以12~15kgf·cm(1.18~1.47N·m)左右为宜。

面板安装型在侧面螺丝安装时，请拆掉传动轴的六角螺母。

面板安装型(RA 7310, RA 7311, RA 7312型)安装在面板时，传动轴的六角螺母的螺丝固定转矩在50kgfcm(4.90N·m)以下。

·面板安装滚轴柱型安装在面板上使用，因为操作速度和动作后移动太大时会损坏开关，所以在安装之际，务必注意。

·面板安装型用侧面螺丝安装使用时，请勿进行冲击操作，特别是复位时的冲击性操作，会损坏传动轴部分，请务必注意。

将面板安装型用侧面螺丝安装固定时，因爪爪角度、操作速度大会损坏传动轴，所以要注意。

其它注意事项

在易沾热水(60°C以上)的环境，请避免在水蒸气中使用。

由于不是完全的油封，请避免直接浸在油水中使用。

根据环境条件，有选择橡胶垫、密封橡胶材质的必要(标准为耐油性橡胶，也备有其他的耐酸性、耐碱耐热性橡胶。)

Install

M4 screws should be used for installation, and washers and spring washers should be used for secure installation. Screw set torque 12~15kgf·cm(1.18~1.47N·m) is appropriate.

Please remove the hexagon nut of the drive shaft when the panel mounting is mounted on the side screw. Panel mount types (RA 7310, RA 7311, RA 7312) are mounted on the panel when the drive shaft is on the screw torque of hexagon nut is below 50kgfcm(4.90N·m).

4、对于较大超行程有良好的缓冲、减震作用

Has a good cushion, shock absorption to larger ultra-trip

5、已通过CCC、CE认证

Certificate: CCC, CE

传动形式 Drive from

传动形式 Drive type	操作按钮驱动型 Plug column short button type	插销型 Plug column type	带六角螺母密封型 Panel installation plug column type	带六角螺母密封型 Panel installation of roller plug column type
示意图 Schematic diagram				
驱动形式 Drive type	按钮型 Button type	滚轴柱型 Roller type roller lever type	滚轴柱柱型 Roller shaft lever type	弹簧按钮型 Spring butt type
示意图 Schematic diagram				

额定值及性能概述 Rated value and performance

额定工作电流 Rated work current	10A 125V, 250VAC;0.4A 115VDC(阻性负载) 10A 125V, 250VAC;0.4A 115VDC(Resistance load)	
触点规格 Contact Specification	接触电阻(初始值) Contact resistance(initial value)	15mΩ以下(不含铜线电阻) Under 15mΩ(without copper wire resistance)
	触点材料 Contact Material	用化学式银氧化镉触点(如需不含镉的材料【符合RoHS指令】可定制) With the chemical formula silver cadmium oxide contact(can make to the RoHS directive)
电气性能 Electrical performance	绝缘电阻(初始值) Insulation resistance (initial value)	100MΩ以上(用DC500绝缘电阻计检测) 100MΩ min. (tested by 500VDC insulation ohmer)
	耐击穿电压 Voltage-withstanding	在非连接端子之间(初始值): 1, 500V 50/60Hz 1分钟 在无电压金属件与各端子之间: 2, 000V 50/60Hz 1分钟 在接地与接线端子之间: 2, 000V 50/60Hz 1分钟 Non-connected terminal: 1, 500V 50/60Hz 1 min No-voltage metal part and terminal: 2, 000V 50/60Hz 1min Ground and terminal: 2, 000V 50/60Hz 1min
机械性能 Mechanical	耐冲击性 Shock-resistant	自由状态 Free state 98m/s ² (10G)以下 Under 98m/s ² (10G)
	耐振动性 Vibration resistance	满载状态下 Full load state 294m/s ² (30G)以下 Under 294m/s ² (30G)
寿命 Life	机械寿命(额定超程OT) Mechanical(overtravel OT)	双振幅1.5mm 10~55Hz(触点离开为1ms以下) 10-55Hz,1.5mm double amplitude (contact left is under 1ms)
	电气寿命(阻性负载) Electrical(resistance load)	100万次以上(通断频率50次/分钟) 1,000,000 operations min(on-off frequency 50 operations/min)
使用条件 Use condition	环境温度/环境湿度 Ambient temperature and humidity	5万次以上(通断频率20次/分钟) 50,000 operations min(on-off frequency 20 operations/min)
	最大通断频率 Max.on-off frequency	环境温度/环境湿度 Ambient temperature and humidity -20°C~+60°C(应无结冰、凝露)/95%RH以下(+5~20°C左右) -20°C~+60°C (without frozen and dew),under 95%(about +5~20°C)
		120次/分钟 120 operation/min

工作特性 Work characteristic

传动形式 Drive form	特性 Characteristic	动作压力(O _F) 最大 Action Pressure(O _F) max (N/gf)	复位力(R _F) 最小 Release force(R _F) min(N/gf)	预行程(P _T) 最大 Pre-travel(P _T) max(mm)	差程(MD) 最大 Movement differential(MD) max.(mm)	超程(OT) 最小 Over travel (OT) min(mm)	动作位置(OP) Actopn seat (OP) (mm)
塞柱短按钮型 Plug column short button type		5.88(600)	0.98(100)	2.0	0.8	0.8	30±0.8
塞柱型 plug column type		5.88(600)	0.98(100)	2.0	0.8	5.0	44±1.2
杠杆型 Lever type		1.47(150)	0.39(40)	13.5	3.2	4.0	25±2.0
弹簧软杆型 Spring soft rod type		1.18(120)	-	25	-	11	36 (空行程Full travel)
单方向动作滚轮杠杆型 one-way action roller lever type		1.96(200)	0.59(60)	11.0	2.4	3.0	50±2.0
短杠杆型 Short lever type		2.16(220)	0.59(60)	8.5	2.0	2.5	25±1.3
滚轮短杠杆型 Roller short lever type		2.35(240)	0.78(80)	6.5	1.5	2.0	40±1.6
单方向动作滚轮短杠杆型 One-way action roller short lever type		2.75(280)	0.98(100)	6.5	1.5	2.0	50±1.6
面板安装式塞柱型 panel installation plug column type		5.88(600)	0.98(100)	2.0	0.8	6.0	21.8±0.8
面板安装式滚轮塞柱型 panel linstallation of roller plug column type		5.88(600)	0.98(100)	2.0	0.8	6.0	33.3±1.2
面板安装式交叉滚轮塞柱型 Panel installation of cross roller pulg column type		5.88(600)	0.98(100)	2.0	0.8	6.0	33.3±1.2
滚轮杠杆型 lever type roller lever type		1.77(180)	0.49(50)	11.0	2.4	3.0	40±1.9

图片展示 Pictures

塞柱短按钮型
Plug column short button type



RA7100

塞柱型
Plug column type



RA7110

面板安装式塞柱型
Panel installation plug column type



RA7310

面板安装式滚轮塞柱型
Panel installation of roller plug column type



RA7311

面板安装式交叉滚轮塞柱型
Panel installation of cross roller plug



RA7312

短杠杆型
Short lever type



RA7140

杠杆型
Lever type



RA7120

滚轮短杠杆型
Roller short lever type



RA7141

滚轮杠杆型
Roller lever type



RA7121

单向动作滚轮杠杆型
One-way action roller lever type



RA7124

单向动作滚轮短杠杆型
One-way action roller short lever type



RA7144

弹簧软杆型
Spring soft rod type



RA7166

RCSK 系列磁吹微动开关 专利号:ZL 2015 2 0862753.3

RCSK Series Magnetic Blowing Micro Switch

高性能、磁吹电弧机构专用开关

High performance, magnrntic blowout mechar special switch

(尺寸单位Size Unit : mm)



(滚轮杠杆型 Roller Lever Type)

特点 Characteristic

- △ 开关内部的瞬动机构有动作速度快、拉弧少，操作灵活、轻巧、触点采用银基合金。
- △ 其特点是触点接触面积大，散热快，外壳材质为聚碳酸酯，其机械强度高，耐热，耐寒，抗老化 and 电气性能好等特点。

The inner of switch has a one block instant move structure, it is valid, blowout few, flexible operating, slight, the contacts are made of silver-base Alloy, and itself is made of high quality project plastic, which is a wide range of contacts, easy to radiate. The material of shell is made of PC. It has a high mechanical strength, good in heat-resistant, cold-resistant, anti-aging and good in electrical features.

使用说明 Brief Introduction

RCSK-1 开关是引进国外先进的技术研制的国产化新产品。该开关适用于控制各种高压开关操作机构的合闸、分闸、开闭锁、信号回路等二次回路之用。该开关由外壳、滑轮组、瞬动机构、常开、闭触点组成。

RCSK-1 系列开关适用于交流50Hz，额定工作电压AC380V,DC220V，额定工作电流DC220V/5A,AC380V/8A的电路中

RCSK-1 series Magnetic Switch is a nationalize product made according to Advanced technologies. This switch is used to control all kind of high voltage switch operating instruction' s switch closing and making, lock and unlocked, signal return and second return.

The switch is made up of shell, actuator, mounting, contact areas and terminals.

RCSK-1 Series Magnetic Switch is widely used in AC control circuit of 50Hz, with a voltage up to 380V and a rated current 8A or in DC control circuits with a voltage up to 220V and rated current DC-5A.

注意

- 安装、维护与保养时，应由具有专业资格的人员操作；
- 产品的各项特性出厂时已稳定，使用中不能自行拆装或随意调节；
- 请不要在易燃性气体、爆炸性气体等环境中单独使用开关。开合时产生的电弧和热量等可能导致着火或爆炸。
- 开关不是防水密封结构。因此在油或水飞溅、飞散或有尘埃附着的地方，请用保护盖来防止直接飞溅。
- 请将开关安装在不会直接接触到切屑或尘埃的位置。必须保证驱动杆和开关本体上不会堆积切屑和泥状物质。
- 请不要在有热水（60°C 以上）的地方和水蒸气中使用。
- 请不要在指定的温度和大气条件之外使用开关。如果有急剧的温度变化，热冲击会导致开关松动，造成故障。
- 操作人员不小心将开关安装在易发生误动作或事故的地方时，请加装外罩。

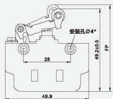
Look out

- Installation, maintenance and maintenance should be operated by professionally qualified personnel;
- The characteristics of the product have been set at the factory, and can not be disassembled or adjusted at will in use;
- Please do not use the switch alone in flammable gas, explosive gas and other environments. openThe electric arc and heat generated in time can cause fire or explosion.
- The switch is not waterproof and sealed. So oil or water spatter, fly or have dust attachedUse protective covers to prevent direct droplets.
- Install the switch in a position where it will not come into direct contact with chips or dust. Must guaranteeDrive rod and switch body will not accumulate cutting chips and mud material.
- Do not use in places with hot water (above 60°C) and in water vapor.
- Please do not use the switch outside the specified temperature and atmospheric conditions.If there is a sharp temperature change, thermal shock can cause the switch to loosen, causing failure.
- When the operator accidentally installs the switch in a place prone to misoperation or accidents,Please install the outer cover.

RCSK 系列磁吹微动开关

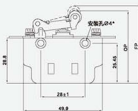
RCSK Series Magnetic Blowing Micro Switch

(尺寸单位Size Unit : mm)



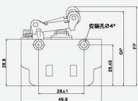
RCSK-1-11

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤800g	≥200g	3mm±1mm	100万次	5万次	0.8~1.2N·m



RCSK-1-11W

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤800g	≥200g	3mm±1mm	100万次	5万次	0.8~1.2N·m



RCSK-1-22(两圆Round)

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤1600g	≥400g	4mm	100万次	5万次	0.8~1.2N·m

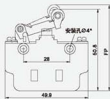
※注: 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。

※Note: This picture just for customer's references, please inquiry for details when ordering.

RCSK 系列磁吹微动开关

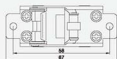
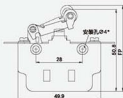
RCSK Series Magnetic Blowing Micro Switch

(尺寸单位Size Unit : mm)



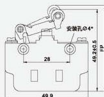
RCSK-1-22

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初阻值 Initial contact resistance	动作力 OF	回弹力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子阻力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤1600g	≥400g	3mm±1mm	100万次	5万次	0.8~1.2N·m



RCSK-1-22W

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初阻值 Initial contact resistance	动作力 OF	回弹力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子阻力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤1600g	≥400g	3mm±1mm	100万次	5万次	0.8~1.2N·m



RCSK-1-33(三輪Round)

额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初阻值 Initial contact resistance	动作力 OF	回弹力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子阻力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤2400g	≥600g	3mm±1mm	100万次	5万次	0.8~1.2N·m

※注: 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。

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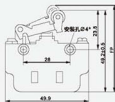
RCSK 系列磁吹微动开关

RCSK Series Magnetic Blowing Micro Switch

(尺寸单位Size Unit : mm)



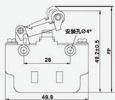
RCSK-1-33-K2



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 220V	5A	≤120°C	≥100MΩ	AC 180V	≤50mΩ	≤2400g	≥800g	3mm±1mm	100万次	5万次	0.8~1.2N·m



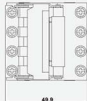
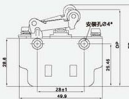
RCSK-1-44



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 250V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤3200g	≥800g	3mm±1mm	100万次	5万次	0.8~1.2N·m



RCSK-1-44-K



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal resistance
DC 220V	5A	≤120°C	≥100MΩ	AC 180V	≤50mV	≤3200g	≥800g	4mm	100万次	5万次	0.8~1.2N·m

※注: 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。

※Note: This picture just for customer's references, please inquiry for details when ordering.

RS847 IP67防水系列

RS847 Series IP67 Waterproof Switch

IP67高性能、便捷性防水型开关
 IP67 High performance, convenient waterproof switch

(尺寸单位Size Unit : mm)



(滚轮杠杆型 Roller Lever Type)

型号说明 Model Designations

R - S847 - 1 - 11□

① ② ③

- ① 企业代号 Corporate code
- ② 产品代号 Product code
- ③ 派生规格代号 (无标记表示螺孔型, F表示带导线型)
 Derived specification code (no mark for hole type, F for wire type)

概述 Brief Introduction

RS847 速动开关为速动转换型, 技术参数符合GB/T14048.5-2017, 具有安装方便、速动、自净、强制断开、模块化、防护等级高(最高可达IP67)等特点。两组动触点相互绝缘, 可以不同极随意使用, 接点为自净带有永磁灭弧功能, 尤其适合接通小电流信号, 如传送计算机信号, 同时又有较强的分断能力, 且接线时对极性无要求。

RS847 系列开关适用于交直流上, 额定工作电压AC250V, DC250V, 额定工作电流AC250V/10A, DC250V/5A的电路中。

RS847 主要应用于对接点防护等级要求较高的环境中, 现已广泛应用于出口机车及车辆。

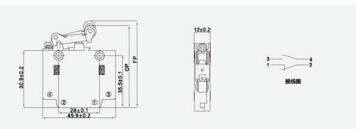
RS847 quick switch for quick action conversion type, technical performance in line with GB/T14048.5-2017, with easy installation, quick action, self-cleaning, forced disconnection, modularization, high protection level (up to IP67) and other characteristics. The two groups of moving contacts are insulated from each other, and can be used at will with different poles. The contacts are self-cleaning with permanent magnet arc extinguishing function, especially suitable for connecting small current signals, such as transmitting computer signals, and have strong breaking ability, and there is no requirement for polarity when wiring. RS847 series switch is suitable for AC and DC, rated working voltage AC250V, DC250V, rated working current AC250V/10A, DC250V/5A circuit. RS847 is mainly used in the environment where the protection level of the contact is higher, and has been widely used in export locomotives and vehicles.

RS847 IP67防水系列
 RS847 Series IP67 Waterproof Switch

型号 Model number	名称 Name	型号 Model number	名称 Name
RS847-1-11	螺孔型单联防水磁吹开关	RS847-1-11F	导线型单联防水磁吹开关



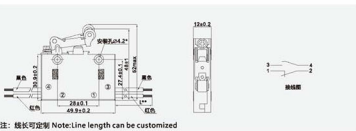
RS847-1-11



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初阻值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 220V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mΩ	≤600g	≥200g	4mm	100万次	10万次	0.8~1.2N·m



RS847-1-11F



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初阻值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 250V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mΩ	≤600g	≥200g	4mm	100万次	5万次	0.8~1.2N·m

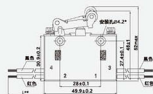
RS847 IP67防水系列

RS847 Series IP67 Waterproof Switch

(尺寸单位Size Unit : mm)



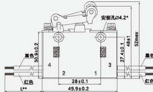
RS847-1-22F



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 220V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mΩ	≤1200g	≥400g	3mm±1mm	100万次	5万次	0.8~1.2N·m



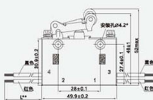
RS847-1-22F (单轮)



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 250V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mV	≤1200g	≥400g	3mm±1mm	100万次	5万次	0.8~1.2N·m



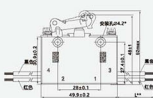
RS847-1-33F



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 220V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mV	≤1800g	≥600g	4mm	100万次	5万次	0.8~1.2N·m



RS847-1-33F-K



额定电压 Rated voltage	额定电流 Rated current	变形温度等级 Heat distortion temperature	绝缘电阻 Insulation resistance	耐电压 Withstand voltage	接触电阻初期值 Initial contact resistance	动作力 OF	回复力 RF	动作行程 PT	机械寿命 Mechanical life	电气寿命 Electrical life	端子扭力 Terminal torque
DC 220V	5A	≤120°C	≥100MΩ	AC 1890V	≤50mV	≤1800g	≥600g	4mm	100万次	5万次	0.8~1.2N·m

※注: 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。

※Note: This picture just for customer's references, please inquiry for details when ordering.

RLXW20 系列微动开关 专利号:ZL 2015 2 0861783.2

RLXW20 Series Micro Switch

耐阻燃、可磁吹熄弧、性能优良的开关
Flame-resistant, magnetic blowout switch
with excellent performance

(尺寸单位Size Unit : mm)



(按钮型 Button Type)

特点 Characteristic

△ 开关内部具有一组瞬动机构，触头采用银基合金，机体采用能优良的优质工程塑料制成，具有阻燃、增强、耐热、耐久性高等特点
Characteristic, 接线端子为插拉式 (AMP250-6.3X0.8)

△ The inner of switch has a one block instant move structure, the contacts are made of silver-base Alloy, and its body is made of high quality project plastic, which is good in inflaming retarding, heat-resistant, stranger long usage, terminal is pulled-in (AMP250.6.3X0.8)

产品型号以及内部结构图

型号说明 Model description

RLX W 20 - 11M

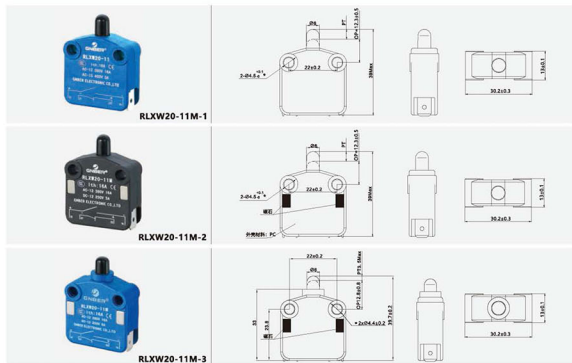
10代表常闭/01代表常开
设计代号(用阿拉伯数字表示)
Design mark
特征代号 (W表示微动开关)
Feature mark
种类代号 (RLX表示主令行程开关)
Specific mark

使用说明 Brief Introduction

RLXW20系列微动开关是我厂研制的产品，可替代进口的同类产品，触头动作灵敏可靠，精度、寿命长、外形美观。该产品的质量技术指标均达到进口同类产品的先进水平。该系列适用于交流50Hz、额定工作电压380V，额定工作电流AC-12 16A，直流电压250V、额定工作电流DC-12 5A的电路中。转换触点同时使用时，建议接于同相位回路。该产品广泛应用于家用电器、机床、电力行业等电路中，作为电磁交流电磁铁或感性负载的控制。

RLXW20 Micro Switch is our latest designed product, can be replace of the same kind from abroad. The contact is in high reliability, high sensitivity, long life, nice appearance, and its quality technical standard has reached at the same kind level of abroad products.

RLXW20 Micro Switch push button is widely used in AC control circuit of 50Hz, with a voltage up to 380V and a rated CURRENT 16A or rated current AC-12, or in DC control circuits with a voltage up to 250V and rated current DC-12 5A. It is widely used in the such circuit like appliance, automatic, electronic and etc, such as magnetic AC electric magnetic or inductive load capacity control.



说明：可定制按钮高度

Description: Button height can be customized

RLXW24 IP67防水系列

RLXW24 Series IP67 Waterproof Switch

适用于农业设备、大型家电等
It Applied To Agriculture Equipment, Large Home Appliance



(滚轮短杠杆型 Roller Short Lever Type)

特点及应用 Characteristics and Application

- 动作灵敏可靠、精度高、寿命长。
sensitive motion, high precision, longer life.
- 触点材料可选用金合金、银合金或银制的, 以承受不同的电气负载。
Contact Material: Billion/Silver base point to meet different electrical load.
- 产品具有较好的外壳防护能力, 接线方式为护套引出线, 提供多种电线规格, 供客户灵活选用。
- Use better protection Shell, Sheath lead line connection mode, and offer different size wire for you to choose from
- 提供多种驱动形式, 可满足不同场合的使用。
Provide various Drive form to meet with the different places for use.
- 适用于AC250V、DC250V的控制电路中, 作为主令电器或者在其他电器中作为配件。
- Applicable to the control circuit under 250VAC/250VDC, as control electrical equipment or as fitting
- 该产品广泛应用于家用电器、汽车行业、机床、电子电力行业、自动化应用等行业。
- widely use in domestic appliance, car industry, electronic and machinery industries, automation application industry etc.

型号说明 Model Designations

RLX W 24 - □ □

派生规格代号: (无标记表示柱塞型, A表示带直型杠杆, B表示带短滚轮杠杆, C表示带长滚轮杠杆, D表示R轴杠杆, 特殊规格可定制)
Drive lever type: none mean Plunger lever: A mean short roller lever, B represents a lever with a short roller, C mean Longer Lever, D mean R Lever, it also can customized

基本规格代号: 11表示带一组转换触点, 10表示带一组常开触点, 01表示带一组常闭触点
Regular model code: 11 mean within one group conversion contact, 10 mean within one group normally open contact, 01 mean within one group normally close contact

设计代号 design mark

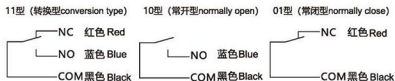
表示具有微动开关特性 own technical character of micro switch

种类代号 (RLX表示主令行程开关) Product design mark (RLX mean Control limit switch)

技术特性 Specification

项目 Item No.	特性 Data	
	AC-12	DC-12
使用类别 Use categories	AC-12	DC-12
额定绝缘电压Ui Rated insulation Voltage Ui	250V	
约定发热电流Ith Conventional thermal Current Ith	15A	
额定工作电压Ue Rated work Voltage	250V	250V
额定工作电流Ie Rated work Current	10A	0.3A
接触电阻 Contact resistance	≤30mΩ (不含线阻) not include line resistance	
技术特性 Technical properties	开关带电元件与易于触及的表面间 Between live element and easily contact surface	AC1500V±3% 45~65Hz 5s
	带电零件对地 Electrically live parts and ground	AC1500V±3% 45~65Hz 5s
机械寿命 Mechanical Life	≥30万次 on-off per min	
电气寿命 Electrical Life	≥10万次 on-off per min	
使用环境温度 Ambient temperature during use	-5°C~40°C	
IP等级 IP	IP65、IP67	

接触形式 Contact form



接线规格 Wire gauge

*标准型电线规格: Imperial Standard Wire Gauge(ISWG):

- 277IEC06(RV)32/0.2 1mm²颜色分别为: 红色、蓝色、黑色; for three color:red,blue,black
- ZR/DW-RE 30/0.20 1mm² (低烟无卤) 颜色分别为: 红色、蓝色、黑色; (LSOH) for three color:red,blue,black
- RVVP 3X16/0.15(RVVP 型系列 300/300V铜芯聚氯乙烯绝缘屏蔽聚氯乙烯护套电线) 颜色分别为: 棕色、灰色、黑色; for three color: brown,gray,black

4) 电线规格和颜色可以由按客户指定, it can be customized

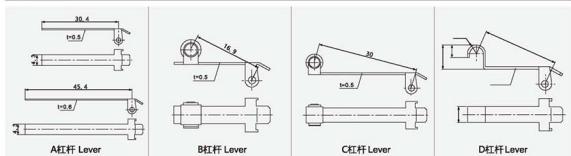
电线长度Wire Length:

- 标准型电线长度为the length of ISWG is300mm;
- 电线长度可以按要求定制it can be customized;

更多接线要求可联络我司客户经理

please contact us for further requirement

驱动杆形式 Lever



更多驱动杆形式可联络我司客户经理

just contact us for more detail

正确使用 Instruction

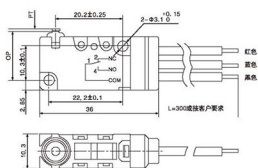
开关虽然满足防水试验条件, 但这些试验是在水中放置一段时间后确定进水程度的试验, 而非在水中进行开闭动作的试验; 在使用过程中应充分注意不要损坏按钮部的密封橡胶。

开关使用前仔细阅读本页, 共通注意事项请查阅《概述》中的相关页。

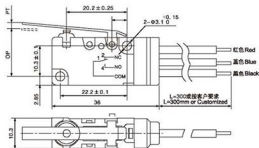
All switch passed the Waterproof testwhich is under water for a period time to conform the inluent degree,rather then do on-of action in water.

Don't damage the seal rubber of the button during use.

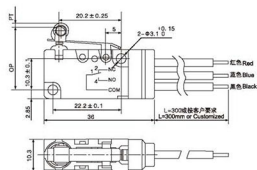
Please read this page carefully befor using,and find dos & don'ts in the following description for your kind reference.



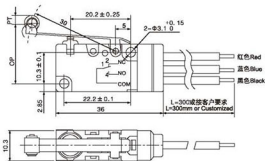
技术参数 Specification	型号 Model No.
动作力 Action Pressure OF:(N)	≤2.5
复位力 Release force RF:(N)	≥0.5
动作行程 Pre-travel PT:(mm)	0.7~1.5
差行程 Movement differential MD:(mm)	≤0.5
动作位置 Actopn seat OP:(mm)	14.7±0.4
超行程 Over travel OT:(mm)	≥0.5



技术参数 Specification	型号 Model No.	RLXW24-□A
动作力 Action Pressure OF:(N)		≤1.25
复位力 Release force RF:(N)		≥0.14
动作行程 Pre-travel PT:(mm)		≤4
差行程 Movement differential MD:(mm)		≤1.5
动作位置 Actopn seat OP:(mm)		15.2±1.2
超行程 Over travel OT:(mm)		≥1.6

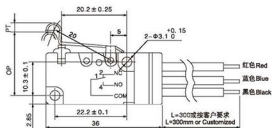


技术参数 Specification	型号 Model No.	RLXW24-□B
动作力 Action Pressure OF:(N)		≤2.5
复位力 Release force RF:(N)		≥0.2
动作行程 Pre-travel PT:(mm)		≤1.6
差行程 Movement differential MD:(mm)		≤0.6
动作位置 Actopn seat OP:(mm)		20.7±0.6
超行程 Over travel OT:(mm)		≥0.8

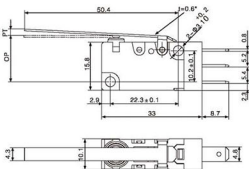


技术参数 Specification	型号 Model No.	RLXW24-□C
动作力 Action Pressure OF:(N)		≤1.25
复位力 Release force RF:(N)		≥0.15
动作行程 Pre-travel PT:(mm)		≤4
差行程 Movement differential MD:(mm)		≤1.5
动作位置 Actopn seat OP:(mm)		20.2±1.6
超行程 Over travel OT:(mm)		≥1.6

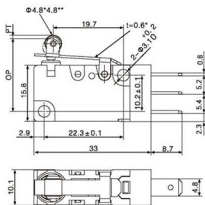
外形尺寸及技术参数 Dimension Drawing & Technical Parameter



技术参数 Specification	型号 Model No.	RLXW24-□D
动作力 Action Pressure OF:(N)		≤2.5
复位力 Release force RF:(N)		≥0.2
动作行程 Pre-travel PT:(mm)		≤1.6
差行程 Movement differential MD:(mm)		≤0.6
动作位置 Actopn seat OP:(mm)		20.7±0.6
超行程 Over travel OT:(mm)		≥0.8



技术参数 Specification	型号 Model No.	RLXW24-11A-C2
动作力 Action Pressure OF:(N)		≤1.2
复位力 Release force RF:(N)		≥0.29
动作行程 Pre-travel PT:(mm)		≤4
差行程 Movement differential MD:(mm)		≤1.3
动作位置 Actopn seat OP:(mm)		13.8±1.2
超行程 Over travel OT:(mm)		≥2.6



技术参数 Specification	型号 Model No.	RLXW24-11B-C2
动作力 Action Pressure OF:(N)		≤4
复位力 Release force RF:(N)		≥0.5
动作行程 Pre-travel PT:(mm)		≤1.6
差行程 Movement differential MD:(mm)		≤0.5
动作位置 Actopn seat OP:(mm)		20.6±0.6
超行程 Over travel OT:(mm)		≥0.8

安装 Mounting

安装时使用M3螺钉，使用平垫圈、弹簧垫圈来紧固。此时请使用0.39~0.59Nm的紧固扭矩安装。

关于绝缘距离(除电线引出部分以外)

如果无法确保零部件所要求的绝缘距离，请使用隔板(若需选用，请联系本公司客服)来确保绝缘距离。

M3 screws, flat washer, spring washer are used to tighten at the time of assembly, meanwhile, please use 0.39-0.59Nm fastening torque for install Insulation distance

Please use the partition if it don't meet the insulation distance of fitting as required

RLXW32 系列磁吹微动开关

RLXW32 Series Micro Switch

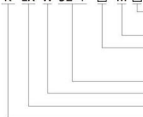
动作灵敏可靠、精度高、寿命长
Sensitive motion, high precision, long life
(尺寸单位 Size Unit: mm)



(按钮型 Bottom Type)

产品型号说明 Model description

R LX W 32-1 □ □ M □



规格代号: B 表示带短滚轴红杆
无红杆时不标注 (Derivative specification no B: short roller)

磁吹灭弧 (magnetic quenching)

基本规格代号: (Basic specification number:
10 表示带一组常开触点 10: with a group of normally open contacts
01 表示带一组常闭触点 01: with a group of normally close contacts)

设计代号 (Design no)

表示具有微动开关特性 Characteristic code (W: microswitch)

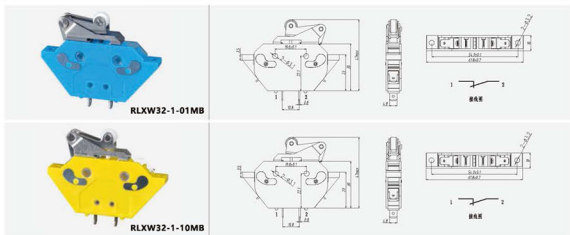
种类代号 (LX 表示主令行程开关) Category code (LX: master limit switch)

企业代号 Enterprise code

技术特性 Technical Characteristics

项目 item	特性 Characteristic		
	AC-12	AC 400V	DC-12
使用类别 Utilization Category	AC-12		
额定绝缘电压 U _i Rated insulation voltage	AC 400V		
约定发热电流 I _{th} Conventional thermal current	10A		
额定工作电压 U _e Rated working voltage	AC 250-380V	DC 220-250V	DC 125V
额定工作电流 I _e Rated working current	10A	2A (t=20ms)	6A
接触电阻 Contact resistance	≤30mΩ		
机械寿命 Mechanical life	≥30 万次 300,000 times operations		
电气寿命 Electrical life	≥1 万次 10,000 times operations		
使用环境温度 Ambient operating temperature	-25°C ~ +85°C		

产品型号以及内部结构图 Product Pictures



RLXW32-1-01MB

RLXW32-1-10MB

特点及应用 Features & Application

1. 触头动作灵敏、可靠、精度高、寿命长、外形美观,可替代进口同类产品。
Quick & Reliable action, high precision, long life, nice appearance, which can replace the similar imported products.
2. 触头材料使用银合金。Contact material: silver alloy.
3. 适用于额定工作电压 AC 380V 和 DC 250V 的控制电路或辅助电路中, 技术特性详见下表。
Applied to the control circuit or auxiliary circuit with the rated working voltage: AC 380V, DC 250V. More technical characteristics will be shown as in the table below.
4. 该产品广泛应用于机械、电气等电路中, 作为电磁铁或感性负载的控制。This product is widely used in the circuit of machinery, electrical, for controlling the electromagnet or the inductive load.

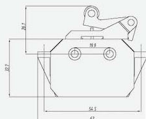
RLXW33 系列磁吹微动开关

RLXW33 Series Micro Switch

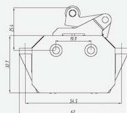
(尺寸单位Size Unit: mm)



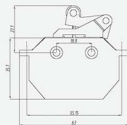
RLXW33-11A1



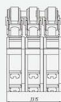
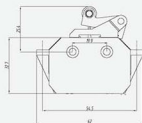
RLXW33-11C



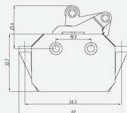
RLXW33-22K



RLXW33-11A(三相)



RLXW33-11D1



LX19K-B 系列微动开关

LX19K-B Series Micro Switch

追求可靠性, 安全性的小型基本开关
 Seeking reliability and safety Minitype Switch
 (尺寸单位Size Unit: mm)



(按钮型 Button Type)

调试与操作 Debugging and operation

- ①. 检查插片铭牌上面的技术参数是否符号使用要求。
- ②. 使用螺钉固定, 拧紧。(建议最好安放弹垫和平垫)
- ③. 安装完毕, 必须仔细检查推动头动作时, 推头有无卡滞现象, 开关芯子是否在要求范围内发生动作, 如有故障应检查重新安装, 再将导线接入。
- ④. 导线选用1根~2根截面积为0.5mm²~1mm²的铜质导线。
- ⑤. 连接导线时, 根据芯子上面的接线示意图, NC为常闭触点, NO为常开触点, 示意图见下图, 仔细区别开关的芯子接线端的常开常闭触点端子组, 切勿接反或者接错。



- ①. Check whether the technical parameters on the insert nameplate require the use of symbols.
- ②. Use screws to fix, tighten. (It is recommended to place the projectile pad and flat pad)
- ③. After installation, it is necessary to carefully check whether the bumping head is stuck or not when the bumping head is pushed, and whether the switch core is moved within the required range. If there is a fault, it should be checked and installed again, and then the wire is connected.
- ④. wire selection of 1~2 copper wire with cross-sectional area of 0.5mm²~1mm².
- ⑤. When connecting wires, according to the wiring diagram on the core, NC is normally closed contact, NO is normally open contact, see the diagram below, carefully distinguish the normally open normally closed contact terminal group of the switch core wiring end, do not connect reverse or wrong.

△ 危险

- ①. 严禁湿手操作行程开关;
- ②. 使用中, 严禁触摸导电部位;
- ③. 维护与保养时, 必须确保产品不带电;

△ Danger

- ①. It is strictly prohibited to operate the travel switch with wet hands;
- ②. In use, do not touch the conductive part;
- ③. Maintenance and maintenance, must ensure that the product is not live;

△ 注意

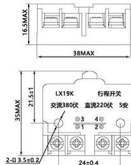
- ①. 安装、维护与保养时, 应由具有专业资格的人员操作;
- ②. 产品的各项特性出厂时已整定, 使用中不能自行拆装或随意调节;
- ③. 使用前请确认产品工作电压、额定电流、频率及特性是否符合工作要求;
- ④. 如果产品在开箱时有破损或异常响声, 应拒绝使用并联系供应商;
- ⑤. 产品报废时, 请做好产品废弃物处理, 谢谢您的合作;

△ Pay attention

- ①. Installation, maintenance and maintenance, should be operated by qualified personnel;
- ②. The characteristics of the product have been set when leaving the factory, and can not be disassembled or adjusted at will in use;
- ③. Before use, please confirm whether the working voltage, rated current, frequency and characteristics of the product are in line with the operationRequest;
- ④. If the product is damaged or abnormal sound when unpacking, refuse to use and contact the supplier;
- ⑤. When the product is scrapped, please sit down and dispose of the product waste. Thank you for your cooperation;

项目 Project	内容 Content
外观 Appearance	无污染、无凝露; 如污, 需清洁; 无破损外壳, 连接端子颜色无变色 No dust, no condensation; if so, clean it; No damaged case, The connection terminal color does not change
接线端子拧紧 Terminal link	按扭力矩0.6N.m~0.8N.m拧紧, 不松动 Tighten the screw with a torque of 0.6N.m to 0.8N.m
开关的接通/断开可靠性 On-off reliability of the switch	开关发生动作前与动作后是否接通和断开 Whether the switch is connected and broken before and after operation

LX19K行程开关结构形式 Product Pitures



产品型号 Product model	LX19K
技术参数 Technical parameter	AC-15Ue: 380V le: 0.5A DC-13Ue: 220V le: 0.1A
防护等级 Protection class	IP40
约定电流 Conventional current	Ith=5A
撞头结构形式 Bump head structure form	元件 Element
常开常闭触点 Normally open normally closed contact	各1对 1 pair each
动作行程 Motion stroke	1.5~3.5mm
超行程 overstroke	≥0.5mm
动作力 Action force	≤10N
机械寿命 Mechanical life	≥5万 ≥ 50,000
电气寿命 Electrical life	≥1万 ≥ 10,000
负荷标准 Load standard	GB/T14048.5

RLXW2-11 系列微动开关

RLXW2-11 Series Micro Switch

动作灵敏可靠、精度高、寿命长
Sensitive motion, high precision, long life
(尺寸单位 Size Unit : mm)



(按钮型 Buttom Type)

调试与操作 Debugging and operation

- 检查插片铭牌上面的技术参数是否符号使用要求。
- 使用螺钉固定，拧紧。(建议最好安放弹垫和平垫)
- 安装完毕，必须仔细检查推动撞头动作时，撞头有无卡滞现象，开关芯子是否在要求范围内发生动作，如有故障应检查重新安装，再将导线接入。
- 导线选用1根~2根截面积为 $0.5\text{mm}^2\sim 1\text{mm}^2$ 的铜质导线。
- Check whether the technical parameters on the insert nameplate require the use of symbols.
- Use screws to fix, tighten. (It is recommended to place the projectile pad and flat pad)
- After installation, it is necessary to carefully check whether the bumping head is stuck or not when the bumping head is pushed, and whether the switch core is moved within the required range. If there is a fault, it should be checked and installed again, and then the wire is connected.
- wire selection of 1 ~2 copper wire with cross-sectional area of $0.5\text{mm}^2\sim 1\text{mm}^2$.

△ Pay attention

- Installation, maintenance and adjustment should be operated by qualified personnel;
- The characteristics of the product have been set when leaving the factory, and can not be disassembled or adjusted at will in use;
- Before use, please confirm whether the working voltage, rated current, frequency and characteristics of the product meet the working requirements;
- If the product is damaged or abnormal sound when unpacking, refuse to use and contact the supplier;
- When the product is scrapped, please sit down and dispose of the product waste. Thank you for your cooperation;

项目 Project	内容 Content
外观 Appearance	无灰尘、无潮湿；如有，请清洁；无破损外壳。连接端子颜色无变化 No dust, no condensation; if so, clean it; No damaged case, the connection terminal color does not change
接线端子链接 Terminal link	按扭力矩 $0.6\text{N}\cdot\text{m}\sim 0.8\text{N}\cdot\text{m}$ 拧紧，不松动 Tighten the screw with a torque of $0.6\text{N}\cdot\text{m}$ to $0.8\text{N}\cdot\text{m}$
开关的接通断开可靠性 On-off reliability of the switch	开关发生动作前与动作后是否接通和断开 Whether the switch is connected and broken before and after operation

安全告知 Safety notification

在安装、操作、运行、维护、检查之前，请务必认真阅读说明书，并
按照说明书上的内容准确安装、使用本产品。

Before installation, operation, operation, maintenance, and inspection, please read the instructions carefully and install and use the product according to the instructions.

△ 危险

- 严禁湿手操作行程开关；
- 使用中，严禁触摸导电部位；
- 维护与保养时，必须确保产品不带电；

△ Danger

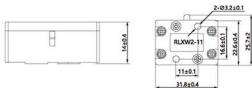
- It is strictly prohibited to operate the travel switch with wet hands;
- In use, do not touch the conductive part;
- Maintenance and maintenance, must ensure that the product is not live;

△ 注意

- 安装、维护与保养时，应由具有专业资格的人员操作；
- 产品的各项特性出厂时已整定，使用中不能自行拆装或随意调节；
- 使用前请确认产品工作电压、额定电流、频率及特性是否符合工作要求；
- 如果产品在开闭时有破损或异常响声，应拒绝使用并联系供应商；
- 产品报废时，请坐好产品废弃物处理，感谢您的合作；

RLXW2-11行程开关数据 Data

产品型号	RLXW2-11
技术参数	AC-15Ue: 380V le: 0.5A DC-13Ue: 220V le: 0.1A
防护等级	IP40
约定电流	Ith=5A
撞头结构形式	元件 Element
常开常闭触点	各1对 1 pair each
动作行程	0.9~2mm
翻行程	≥0.5mm
动作力	≤5N
机械寿命	≥2.5万
电气寿命	≥1万
负荷标准	GB/T14048.5



RLXW35-11 系列微动开关

RLXW35-11 Series Micro Switch

动作灵敏可靠、精度高、寿命长
Sensitive motion, high precision, long life
 (尺寸单位 Size Unit : mm)



(按钮型 Bottom Type)

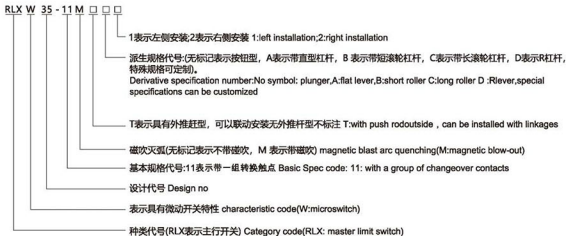
参数 Approved standards

使用环境温度	-25°C +85°C
额定电压	DC-12 250V
额定电流	5A
变形温度等级	≤120°C
绝缘电阻	≥100MΩ
耐电压	AC 1890V
接触电阻初数值	≤30MΩ
动作力 OF	≤4N
复位力 RF	≥1N
差行程 MD	≤0.9mm
动作位置 OP	11.2-11.65
超行程 OT	≥0.7
机械寿命	≥30万次
电气寿命	≥10万次

特点及应用 Characteristics and Application

- 动作灵敏可靠、精度高、寿命长。sensitive motion, high precision, longer life.
- 触点材料可选用金合金、银合金或银制的, 以承受不同的电气负载。Contact Material: Billion/Silver base point to meet different electrical load.
- 提供多种快速连接端子, 供客户灵活选用。Variety of quick connect terminals, for customer flexibly selection.
- 提供多种驱动形式, 可满足不同场合的使用。Provide various Drive form to meet with the different places for use.
- 适用于AC250V、DC250V的控制电路中, 作为主电或者在其他电器中作为配件。触点型式为 Za 型, 转换触点同使用时, 建议接于同相位回路。
- Applicable to the control circuit with AC 250DC 250V, used as parts for masterelectrical appliances or alternative appliances. Contact form: Za, it is recommended to connect in the same phase circuit while using the change-over contact.
- 该产品广泛应用于家用电器、汽车行业、机床、电子电力行业、自动化应用等行业, 作为电磁铁或感性负载的控制。
- This product is widely used for controlling electromagnet or inductive load, such as home appliance, machinetool, power electronic and automation application.

代号说明 Code instruction



RT 系列钮子开关

RT Series Toggle Switch

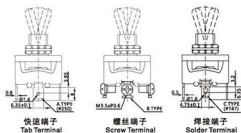
大容量、长寿命、手感舒适的基本型钮子开关
Toggle switches in high-capacity, long life and comfortable handtouch

(尺寸单位Size Unit: mm)

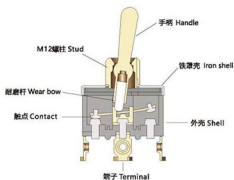


(螺钉端子型 Screw Terminal Type)

安装孔加工尺寸 Installation hole dimension (mm)



产品构造图 Product structure



特点 Characteristic

1、额定电流规格丰富，最高开闭容量
High in rate current specification, the highest on-off capacity

- △ 可达15A 250VAC
- △ 电流规格：3-15A可选用
- △ Reach 15A 250VAC
- △ Current specification:choosing from 3-15A

2、超长寿命 Long life

- △ 机械寿命：50000次以上*
- △ 电气寿命：10000次以上*(*系指1极电路的规格)
- △ Mechanical life: 50,000 operations min.
- △ Electrical life: 25,000 operation min (for the specification of 1 pole circuit)

3、操作轻便 Operation Light

- △ 操作手柄时轻巧、灵活、仅有4.2Nm的力矩，手感觉其舒适(1极电路的规格)。
- △ When operating handle light weight, flexible, just 1.2Nm torque, comfortable in touching (for 1 pole circuit)

4、端子规格齐全 Terminal specification is complete



5、已通过CE认证 Certificate

6、操作与接触形式(此处型号仅以电流规格15A为例)
Operation and contact form (15A current as example)

型号 Model	定向锁止口 Directional locking tongue 向下 Down	中 Mid	向上 Up
RT-1021	ON 1-3	NONE	OFF -
RT-1121	ON 2-3	NONE	ON 2-1
RT-1122	ON 2-3	OFF	ON 2-1
RT-1221	ON 1-3 4-6	NONE	OFF -
RT-1321	ON 2-3 5-6	NONE	ON 2-1
RT-1322	ON 2-3 5-6	OFF	ON 2-1
RT-1321FS	(ON) 2-3 5-6	NONE	ON 2-1 5-4
RT-1322FS	(ON) 2-3 5-6	OFF	(ON) 2-1 5-4

额定值及性能概述 Rated value and performance

额定工作电流 Rated work current	15A, 10A, 6A, 3A/125V, 250VAC(阻性负载 Resistance load)		
触点规格 Contact Specification	接触电阻(初始值) Contact resistance(initial value)	15mΩ以下 Under 15mΩ	
	触点材料 Contact Material	用化学式银氧化镉触点(如需不含镉的材料【符合RoHS指令】可定制) With the chemical formula silver cadmium oxide contact(can making meet the RoHS directive)	
电气性能 Electrical performance	绝缘电阻(初始值) Insulation resistance (initial value)	100MΩ以上(在DC500V绝缘电阻计检测) 100MΩ min. (tested by 500VDC insulation ohmer)	
	耐受电压 Voltage-withstanding	非连接端子之间(初始值): 1, 000V 50/60Hz 1分钟 无电压金属件与各端子之间: 接地与各端子之间: 2, 000V 50/60Hz 1分钟 Non-connected terminal: 1, 000V 50/60Hz 1 min No-voltage metal part and terminal: Ground and terminal: 2, 000V 50/60Hz 1min	
机械性能 Mechanical	耐冲击性 Shock-resistant	自由状态 Free state	98m/s ² (10G)以下 Under 98m/s ² (10G)
		满载状态下 Full load state	500m/s ² (50G)以下 Under 294m/s ² (30G)
	耐振动能力 Vibration resistance	双振幅1.5mm 10~55Hz(触点离开为1ms以下) 10~55Hz,1.5mm double amplitude (contact left is under 1ms)	
寿命 Life	机械寿命 Mechanical	100万次以上(通断频率20次/分钟) 10,000,00 operations min(on-off frequency 20 operations/min)	
	电气寿命(阻性负载) Electrical(resistance load)	10万次以上(额定负载, 7次/分钟) 1,000,00 operations min(rate loading 7 operations/min)	
使用条件 Use condition	环境温度/环境湿度 Ambient temperature and humidity	-20℃~+70℃/(应无结冰、凝露)/85%RH以下(在+5~20℃左右) -20℃~+70℃ (without frozen and dew),under 85%(about +5~20℃)	
	最大通断频率 Max.on-off frequency	30次/分钟 30 operation/min	

产品型号说明 Model description



FS表示复位(注:备有单边、双边复位)
FS meaning reset (Notes:single-throw and double-throw reset)

端子规格(C:插销#6.3端子, E:焊接端子)
Terminal specification(C:6.3 bolt terminal,E:Weld terminal)

系列号(对照图片展示 Pictures的型号)
Series NO.(comparison with pictures' model)

产品设计代号
Products design mark

铭牌 Nameplate



RoHS PC型

铝片型 Aluminum type

※注:本图仅以15A电流规格、螺钉固定端子规格(B)为例展示图片 and 型号, 15A、10A、3A等电流规格的开关外形完全相同, 此处不再重复示意图。
客户订购时请说明电流规格、端子规格、铭牌的选用等情况, 以保证正确购买。

※Note: The Pictures and model display as 15A current,screw fixed terminal(B),the shape are different of 15A,10A,3A. This picture just for customer' s references ,please inquiry for details when ordering.

图片展示 Pictures

1极1通型
1 Pole 1 throw type



RT1021

1极2通型
1 Pole 2 throw type



RT1121

1极2通中停型
1 Pole 2 throw and stop mid type



RT1122

1极2通中停双复位型
1 Pole 2 throw Single-throw reset type



RT1122FS

2极1通型
2 Pole 1 throw type



RT1221

2极2通型
2 Pole 2 throw type



RT1321

2极2通中停型
2 Pole 2 throw and stop mid type



RT1322

2极2通单复位型
2 Pole 2 throw Single-throw reset type



RT1321FS

2极2通中停双复位型
2 Pole 2 throw stop mid and double reset type



RT-1322FS

#6.3端子型
#6.3 terminal type



RT1021-C

#6.3端子型
#6.3 terminal type



RT1321-C

#6.3端子型
#6.3 terminal type



RT1322-C

焊接端子型
Weld terminal type



RT-1122-E

焊接端子型
Weld terminal type



RT-1221-E

焊接端子型
Weld terminal type



RT1322-E



RT 保护套 Protective cover

图片展示 Pictures

2级2通中停双复位型
2 Pole 2 throw Single-throw reset type



RT107

1级2通单复位型
1 Pole 2 throw Single-throw reset type



RT108

2级2通中停型
2 Pole 2 throw and stop mid type



RT201

2级1通单复位型
2 Pole 1 throw Single-throw reset type



RT204

2级2通中停双复位型
2 Pole 2 throw stop mid and double reset type



RT207

焊接端子型
Weld terminal type



RT102-E

焊接端子型
Weld terminal type



RT103-E

焊接端子型
Weld terminal type



RT-104-E

焊接端子型
Weld terminal type



RT110-E

焊接端子型
Weld terminal type



RT202-E

焊接端子型
Weld terminal type



RT205-E

焊接端子型
Weld terminal type



RT206-E

焊接端子型
Weld terminal type



RT-208-E

#6.3端子型
Ø6.3 terminal type



RT105-C

#6.3端子型
Ø6.3 terminal type



RT106-C

#6.3端子型
Ø6.3 terminal type



RT203-C

RME 系列行程开关

RME Series Travel Switch

小巧、精密、寿命长的限位开关
Limit Switch in compact, lightweight and long life

(尺寸单位Size Unit : mm)



(滚轮摆杆型 Roller lever type)

特点 Characteristic

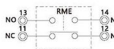
- 1、结构紧凑、体积约为RWL限位开关的1/3
Compact structure, volume is one-third of RWL limit switch



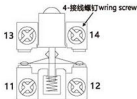
约About 1/3

- 2、横杆接触方式，2回路双断型结构
Bar contact mode, 2 loop pairs of off-type structure

电路图
Circuit diagram



接线图
Wiring diagram



- △ 可定制镀金触点型、适合低电平、小振动电路。
△ Can be customized gold-plated contact type, suitable for low-level, small vibration of the circuit

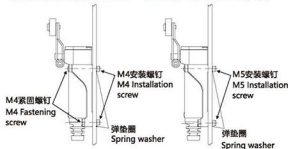
- 3、全开启接线结构，使布线作业更加方便
All open wiring structure, so that wiring job easier

- △ 一拆下端盖，端子部位完全暴露，省去了将手指插入孔中接线的麻烦。产品虽小但接线空间却很大，端子是呈阶梯状设置的，能简单进行接线操作。将电线直接用螺钉拧紧或使用U型或圆形压接端子进行接线。
△ Removing a cover, terminal area completely exposed, eliminating the trouble to pull the holes in the wiring by finger. Product is small, but large in wiring, terminal is a ladder-like setting was able to carry out a simple wiring operation. The direct use of the wire fasten screws or use of U-type or round crimping terminals for wiring.

内部结构 Internal structure



- 4、可从前面或后面安装
Installing from front or behind
前面安装 Installation front 后面安装 Installation behind



- 5、防尘、防水、耐油结构
Dust-proof, water-proof and oil resistant structure

- △ 机芯与罩壳采用橡胶密封垫圈，软线引出部分采用橡胶尾塞(软性密封结构)。
△ 所有机芯的传动部分都有橡胶套与O型圈进行密封。
△ Movement with the casing using rubber sealing gaskets, soft-line leads to part of the casing by rubber end plug(soft seal)
△ All models have a transmission part to the rubber sleeve and O-ring seal

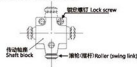
请注意：请勿在水中、油中或经常淋到水、油的地方使用。
Note: Don't use in water, oil or some places link to water and oil.

- 6、已通过CCC、CE认证
Certificate: CCC, CE

头部方向可调节 Adjustable head direction

(仅对RME8108、RM8104、RM8107型而言)
(just for RME8108、RE810、RM8107 types)

- △ 通过松动一个锁定螺钉就可以将传动轴座以90°为单位向4个方向任意设定。
△ By loosening a locking screw on the shaft seat can be 90 degrees to the four directions in s of arbitrary



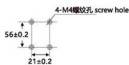
安装孔加工尺寸

Installation front Installation hole dimension

△ 前面安装

(设备面板未打通孔时)

△ Installation front
(Instrument panel doesn't open up holes)

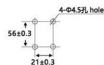


使用不超过15mm的螺钉
Screw no more than 15mm

△ 前面安装

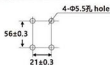
(设备面板孔贯通时)

△ Installation front
(Instrument panel had open up holes)



面板厚度不超过5mm
Panel thickness no more than 5mm

△ 后面安装 Installation back



使用的螺钉长度应为面板厚度 ≤7mm
Screw length under the panel thickness ≤7mm

注意事项

Points to note

注意事项

△当超程过大时，寿命可能因对装置造成的损坏而缩短。
请按下列活宜的范围使用。

类型 Type	超程 Overrun
注 (RME8111, 8112, 8122) Note (RME8111,8112,8122)	1.5~2.0mm
滚轴臂(RME8104, 8107, 8108) Roller Arms (RME8104,8107,8108)	20~30°
可伸缩杆(RME8166, 8169) Retractable rods (RME8166,8169)	12~20mm (在顶部) 12~20mm (at top)

△因为这些开关并非防爆结构，所以，其使用必须避开水或油。同样，水或油一般会洒到开关上的地方，或有过量灰尘积累的地方，要避免使用。

△这些开关的使用在下列开关条件下应避免。如果下列条件成为必要，建议先向我们咨询。

(1)在直接接触有机溶剂、强酸、强碱，或直接暴露于它们的蒸汽的地方使用。

(2)在可燃或腐蚀性气体存在的地方使用。

△为在实际的使用条件下保持高水平可靠性，应对实际工作条件进行检查，以获得良好的产品质量。

额定值及性能概述 Rated value and performance

额定工作电流 Rated work current	5A 125V, 250VAC;0.4A 125VDC(阻性负载) 5A 125V, 250VAC;0.4A 125VDC(Resistance load)		
触点规格 Contact Specification	接触电阻(初始值) Contact resistance(initial value)	15mΩ以下(不含铜线电阻) Under 15mΩ(without copper wire resistance)	
	触点材料 Contact Material	用化学式银氧化镉触点(如需不含镉的材料【符合RoHS指令】可定制) With the chemical formula silver cadmium oxide contact(can making meet the RoHS directive)	
电气性能 Electrical performance	绝缘电阻(初始值) Insulation resistance (initial value)	100MΩ以上(在DC500V绝缘电阻时测得) 100MΩ min. (tested by 500VDC insulation ohmer)	
	耐电压性能 Voltage-withstanding	非连接端子之间(初始值): 1, 000V 50/60Hz 1分钟 无电压金属件与各端子之间: 2, 000V 50/60Hz 1分钟 Non-connected terminal: 1, 000V 50/60Hz 1 min No-voltage metal part and terminal: 2, 000V 50/60Hz 1 min	
机械性能 Mechanical	耐冲击性 Shock-resistant	自由状态下 Free state	98m/s ² (10G)以下 Under 98m/s ² (10G)
		满载状态下 Full load state	294m/s ² (30G)以下 Under 294m/s ² (30G)
	耐振动能力 Vibration resistance	双振幅1.5mm 10~55Hz 10~55Hz,1.5mm double amplitude	
寿命 Life	机构寿命 Mechanical(overtravel OT)	100万次以上(通断频率120次/分钟) 1,000,000 operations min(on-off frequency 50 operations/min)	
	机械寿命(阻性负载) Electrical(resistance load)	10万次以上(额定负载)、电磁接触器FC-100(AC200)负载500万次以上 100,000 operations min(rate loading), Electromagnetic Contactor FC-100(AC200) loading:5,000,000operations min	
使用条件 Use condition	环境温度/环境湿度 Ambient temperature and humidity	-20℃~+60℃/95%RH以下(+5~20℃左右) -20℃~+60℃ (without frozen and dew), under 95%(about +5~20℃)	
	最大通断频率 Max.on-off frequency	120次/分钟 120 operation/min	

图片展示 Pictures

滚轮摆杆型
Roller lever type



RME8104

可调式滚轮摆杆型
Adjustable roller lever



RME8108

可调杆型
Adjustable lever



RME8107

塞柱型
Plug column type



RME8111

滚轮塞柱型
Roller plug column type



RME8112

交叉滚轮塞柱型
Cross roller plug column type



RME8122

弹簧软杆型
Spring soft rod type



RME8166

弹簧杆丝型
Spring wire rod type



RME8169

※注：新RME限位开关系列于2009年9月1日起替代老款RME系列的产品，客户购买时敬请咨询，以保证正确购买。

※Note: New type RME Series instead of old type starting on 1st, Sep 2009. This picture just for customer reference, please inquiry for details when ordering

RWL 系列双回路行程开关

RWL Series Travel Switch

高强度、耐油、防水型双回路限位开关

RWL Double-circuit Limit Switch

(尺寸单位Size Unit : mm)



(滚轮摆杆型 Roller lever type)

特点 Characteristic

- △ 双回路限位开关、用途广泛
- △ 具坚固之一体铸造铝合金外壳
- △ 高机械强度
- △ 具耐油、防水和防压结构
- △ 因装有设定位置指示板，故维护容易
- △ 引动器种类多，方便使用
- △ 内藏接点座有双簧片设计，机械寿命长。
- △ Double-circuit limit switch, widely used
- △ Firm aluminum alloy enclosure
- △ High mechanical strength
- △ Structure preventing oil, water and pressure
- △ Indicating plate with setting position installed in it, easy to maintain
- △ kinds of actuators is taken convenient to use
- △ Built-in contact stand has double-reed, so it has long mechanical life

接点构成 Contact way



安装孔加工尺寸

Installation front installation hole dimension

- △ 前面安装(设备面板未打通孔时)
- △ 前面安装(设备面板孔贯通时)
- △ Installation front (Instrument panel doesn't open up holes)
- △ Installation front (Instrument panel with open up holes)



额定值 Rated number

额定电压 Rated voltage	非电感性负载 Nonelectrical load				电感性负载(A) Electrical load(A)			
	电阻性负载 Resistance load		灯泡负载 Bulb load		电感性负载 Electrical load		马达负载 Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	10	3	1.5	10	5	2.0		
250VAC	5	2	1	5	3	1.0		
480VAC	3	1.5	0.8	3	1.5	0.8		
600VAC	1	1	0.5	1.5	1	0.5		
8VDC	10	6	3	10		6		
14VDC	10	6	3	10		6		
30VDC	6	4	3	6		4		
125VDC	0.8	0.2	0.2	0.8		0.2		
250VDC	0.4	0.1	0.1	0.4		0.1		

- ※ 注：1、电感性负载：功率因素=0.4；时间常数=7msec。
2、灯泡负载之突入电流为额定状态电流之10倍，马达负载之突入，电流为额定状态电流之6倍。
- ※ Note: 1、Electrical load: Power factor=0.4; Time constant=7msec
2、The bulb load current is 10 times as that in stable condition.
Motor load current is 6 times as that in stable condition.

性能概述 Characteristics

操作速度 Operation speed	1mm 至2m/s(RWLCA2型) 1mm to 2m/s(RWLCA2 type)
动作频率 Action frequency	机械：120次/分 电气：30次/分 Mechanically: 120times/minute Electrically: 30time/minute
接触电阻 Contact resistance	15mΩ以上(初期) Under 15mΩ(initial)
绝缘电阻 Insulation resistance	100MΩ以上(在500VDC以下) Under 100MΩ(under 500VDC)
耐电压 Bearing voltage	非连接端子间, 1,000VAC, 50/60Hz持续1分钟 电流零件间与端子 and 接地之间, 2,200VAC, 50/Hz持续1分钟 Non-contact end is 1,000vac, 50/60Hz for one minute current part and noncurrent parts end and connect ground, 2200VAC, 50/60HZ for one minute
振动 Vibration	摆动动作耐久：10至50Hz, 1.5mm 双振幅 Action: 10 to 50Hz, 1.5mm pairs swing
耐冲击 Stock resistance	机械耐久：1,000m/Sec ² (约100G ²) 摆动动作耐久：约300m/Sec ² (约30G ²) Machine: 1,000m/sec ² (about 100G ²) Action: 300m/s Sec ² (about 30g ²)
周围温度 Ambient temperature	使用时：-10至+80°C -10~+80°C
湿度 Humidity	最大95%RH Max 95%RH
使用寿命 Life	机械：1,500,000次以上 (在额定O _T 值下) 电气：250,000次以上 Mechanically: 1,500,000 times above (at rated o _T) Electrically: 250,000 times above
重量 Weight	约275g(RWLCA2) About 275g
保护构造 Protection structure	IEC规格：IP67 IEC specification IP67

动作特性 Action characteristics

型号Models	RWLCA2	RWLD2	RWLNJ	RWLCA12	RWLCL	RWLCA32-41	RWLD	RWLNJ2	RWLNJ1	RWLD3
OF最大Max.	1360g	2720g	150g	1360g	142g	1200g	2720g	120g	80g	2720g
RF最小Min.	227g	910g	-	227g	28g	-	910g	-	-	910g
PT最大Max.	20°	1.7mm	280mm	20°	20°	55°	1.7mm	28mm	28mm	1.7mm
OT最小Min.	30°	5.6mm	-	30°	30°	35	6.4mm	-	-	5.6mm
MD最大Max.	12°	1mm	-	12°	12°	-	1mm	-	-	1mm
TF最大Max.	2720g	-	-	2720g	200g	-	-	-	-	2720g
TT最小Min.	50°	6.5±0.8mm	-	50°	50°	OP:90±10°	OP:34±2.8mm	-	-	9±0.8mm

图片展示 Pictures



RWL CA12



RWL CA32-41



RWL CL



RWL D



RWL D2



RWL D3



RWL NJ



RWL NJ1



RWL NJ2

※注：本图片仅供选型时参考，客户订购时敬请咨询，以保证正确购买。

※Note: This picture just for customer's references, please inquiry for details when ordering.

RLS 系列行程开关

RLS Series Travel Switch

经济型安全开关
Popular Safety Limit Switches

(尺寸单位Size Unit : mm)



(滚轮按钮型 Roller Button type)

特点 Characteristic

- △ 经济适用的安全限位开关
- △ 接点形式: 1NC/1NO
- △ 品种丰富多样可用于标准负载及微小负载
- △ Popular safety limit switch conforming to International standards.
- △ Contact form: 1NC/1NO.
- △ Providing a full lineup, can be used with both standard loads and microloads.

种类 List of Model

传动杆 Actuator	1	2
顶部塞柱型 Top plug type	RLS-101	RLS-301
顶部塞柱滚珠型 Top plunger ball type	RLS-103	RLS-303
单侧悬臂滚珠型(水平) Single-side cantilever ball type (horizontal)	RLS-111	RLS-311
滚珠摆杆型(树脂摆杆, 树脂滚珠) Ball swing rod type (resin swing rod, resin ball)	RLS-121	RLS-321
单侧悬臂滚珠型(垂直) Single-side cantilever ball type (vertical)	RLS-127	RLS-327
可调滚珠摆杆, 锁定型(金属摆杆, 树脂滚珠) Adjustable ball pendulum, locking (metal pendulum, resin ball)	RLS-131	RLS-331
弹簧钢丝型 Spring wire type	RLS-161	RLS-361
塑料棒型 Plastic rod type	RLS-171	RLS-371
弹簧型 Spring type	RLS-181	RLS-381
可调滚珠摆杆, 锁定型(金属摆杆, 橡胶滚珠) Adjustable ball pendulum, locking (metal pendulum, rubber ball)	RLS-191	RLS-391

动作特性 Operating Characteristics

型号 Model	RLS	101	102/103	111	121/121M	127	131/131M	161	171	181	191
		301	302/303	311	321/321M	327	331/331M	361	371	381	391
操作力 Operating force	OF(最大)(Max)	700g	700g	700g	500g	700g	500g	100g	100g	100g	500g
回弹力 Release force	RF(最小)(Min)	200g	200g	200g	100g	200g	100g	40g	40g	40g	100g
预行程 Pre-travel	PT(最大)(Max)	1.8mm	1.8mm	1.8mm	20°	1.8mm	20°	30mm	30mm	30mm	20°
触发位置 Tripping position	TP±10%	2.0mm	2.0mm	2.0mm	10°	2.0mm	22.5°	22.5°	22.5°	22.5°	22.5°
行程移动分辨率 Movement differential	MD(最大)(Max)	1.2mm	1.2mm	1.2mm	75°	1.2mm	10°	14°	14°	14°	10°
过行程 Over travel	OT(最小)(Min)	4.0mm	4.0mm	4.0mm	95°	4.0mm	75°	20mm	20mm	20mm	75°
总行程 Total travel	TT(最小)(Min)	5.8mm	5.8mm	5.8mm	22.5°	5.8mm	95°	50mm	50mm	50mm	95°
摆臂转动角度 Rotary indexing							22.5°				22.5°

型号说明 Model description

RLS-
① ②

①产品系列 Mode

1 : M20

3 : M20

②头部及传动杆 Head and Actuator

01: 顶部塞柱型

Top plug type

03: 顶部塞柱滚珠型

Top plunger ball type

11: 单侧悬臂滚珠型(水平)

Single-side cantilever ball type (horizontal)

21: 滚珠摆杆型(树脂摆杆, 树脂滚珠)

Ball swing rod type (resin swing rod, resin ball)

27: 单侧悬臂滚珠型(垂直)

Single-side cantilever ball type (vertical)

31: 可调滚珠摆杆, 锁定型(金属摆杆, 树脂滚珠)

Adjustable ball pendulum, locking (metal pendulum, resin ball)

61: 弹簧钢丝型

Spring wire type

71: 塑料棒型

Plastic rod type

81: 弹簧型

Spring type

91: 可调滚珠摆杆, 锁定型(金属摆杆, 橡胶滚珠)

Adjustable ball pendulum, locking (metal pendulum, rubber ball)

额定值 Ratings

额定电压 Rated Voltage	非电感性负载 Noninductive Load (A)				电感性负载 Inductive Load (A)			
	电阻性负载 Resistance Load		灯泡负载 Lamp Load		电感性负载 Inductive Load		马达负载 Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	5	5	1.5	0.7	3	3	2	1
250VAC	5	5	1	0.5	3	3	1.5	0.8
8VDC	5	5	3	3	5	4	3	3
14VDC	5	5	3	3	4	4	3	3
30VDC	5	5	3	3	4	4	3	3
125VDC	0.4	0.4						
250VDC	0.2	0.2						
突入电流 Inrush Current	N.C.: 24A以下, N.O.: 12A以下 N.C.: below 24A, N.O.: below 12A							

※注: 1. 电感性负载之功率因素在0.4以上 (AC), 时间常数在7msec以下 (DC)。

2. 灯泡负载之突入电流为稳定状态电流之10倍, 马达负载之突入电流为稳定状态电流之6倍

3. 带弹簧系列产品, 操作体的使用范围为从弹簧的前端到弹簧全长的 以内。

※Note: 1. Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC)

2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current

3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

结构和各部分名称 Structure and Nomenclature

操作速度 Operation Speed	5mm±0.5m/s 5mm-0.5m/s
动作频率 Operating Frequency	电气30次/分 Electrical: 30 operations/min
接触电阻 Contact Resistance	25mΩ以下 (初期) 25mΩ max. (initial value)
绝缘电阻 Insulation Resistance	100MΩ以上 (在500VDC下) 100mΩ min. (below 500VDC)
电介强度 Dielectric Strength	非连续端子间1000VAC, 50/60Hz持续1分钟 Discontinuous terminals between 1000VAC, 50/60Hz for 1 minute
	载电流与无载电流零件间1500VAC, 50/60Hz持续1分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying metal parts
	端子和接地之间1500VAC, 50/60Hz持续1分钟 1500VAC, 50/60 Hz for 1 minute between each terminal and ground
振动 Vibration	10至55Hz, 1.5mm双振幅 10-55Hz, 1.5mm double amplitude
冲击 Shock	机械耐久: 1000m/Sec ² (约100G'S) mechanical durable: 1000/Sec ² (about 100G'S)
	误动作耐久: 300m/Sec ² (约30G'S) Malfunction: 300m/Sec ² (about 30G'S)
周围温度 Ambient Temperature	使用时: -20~70°C (没有结冰) Using: -20~70°C (With no icing)
湿度 Humidity	95%RH以下 < 95%RH
电气寿命 Electrical Life	500,000次以上 500,000 operations above
保护构造 Protection Level	IP66

※注: 导管连接器尺寸常规默认为M20x1.5; 导管连接器尺寸PG13.5, 型号加 (-P), 例: RLS-100-P

※Note: The default size of conduit connector is M20x1.5, outfitting cable connector Conduit connector size is PG13.5, with product model number plus (-P), example: RLS-103-p

RSA 系列行程开关 RSA Series Travel Switch

高性能、耐油防水型限位开关
High-performance, Oil Resistant and Waterproof
of Limit Switch

(尺寸单位Size Unit : mm)



(滚轮摆杆型 Roller lever type)

特点 Characteristic

- △ 坚固金属外壳, 极大摆杆角度 $\pm 95^\circ$
- △ 特长2000万次机械寿命
- △ 不锈钢滚轮, 冲头及弹簧
- △ Strong metal outer shell, swing arm max. $\pm 95^\circ$.
- △ Long life(20,000,000 mechanical operations).
- △ Stainless steel idler wheel, punch and spring.

型号说明 Model description

RSA -□□□□

①

①转动杆 Actuators

- 021: 滚珠摆杆型 Roller Lever
- 031: 可调式滚珠摆杆 Adjustable roller lever
- 001: 顶部柱塞型 Top Plunger
- 003: 顶部滚珠柱塞型 Top Roller Plunger
- 061: 触须型 Wire spring
- 081: 盘簧型 Coil spring
- 071: 塑料棒型 Plastic rod
- 012: 单向动作悬臂滚珠型(水平)
One-way roller arm lever (horizontal)
- 027: 单向动作悬臂滚珠型(垂直)
One-way roller arm lever (vertical)

种类 Odering Information

传动杆 Actuators		型号 Model
滚珠摆杆型 Roller Lever		RSA-021
可调式滚珠摆杆 Adjustable roller lever		RSA-031
顶部柱塞型 Top Plunger		RSA-001
顶部滚珠柱塞型 Top Roller Plunger		RSA-003
触须型 Wire spring		RSA-061
盘簧型 Coil spring		RSA-081
塑料棒型 Plastic rod		RSA-071
单向动作悬臂滚珠型(水平) One-way roller arm lever (horizontal)		RSA-012
单向动作悬臂滚珠型(垂直) One-way roller arm lever (vertical)		RSA-027

环境特性 Data

保护等级Degree of protection	IP66	
环境温度Ambient operating temperature	-25-70°C(无结冰 Without frozen)	
环境湿度Ambient operating humidity	35-95%RH	
耐振动(误动作)Vibration resistance(Malfunction)	10-55Hz, 1.5mm双振幅double amplitude	
耐冲击Shock resistance	耐久Destruction	1,000 m/s ² min.
	误动作Malfunction	100 m/s ² min.
寿命Durability	机械Mechanical	15,000,000 operations min.

触点模块特性 Data

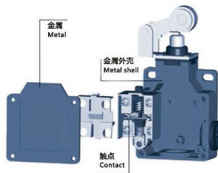
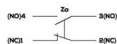
工作频率Operating frequency	机械Mechanical	120 operations/minute max.
	电气Electrical	30 operations/minute max.
触点电阻Contact resistance	15mΩmax.	
额定绝缘电压Rated insulation voltage(Ui)	AC1,000V	
额定频率Rated frequency	50/60 Hz	
污染度Pollution degree(使用环境operating environment)	3(EN60947-5-1)	
防触电防护等级(Protection against electric shock)	Class II	
绝缘强度 Dielectric strength	同极性端子间Between terminals of same polarity	AC1,000V,50/60Hz,1 min
	各端子与不带电部之间 Between each terminal and non-current-carrying part	AC2,000V,50/60Hz,1 min
绝缘电阻Insulation resistance	100 MΩ min.	
额定动作电流Rated operating current (Ie)	5A	
额定动作电压Rated operating voltage (Ue)	AC250V	
寿命 Durability	电气Electrical	1000,000 operations min.

结构和各部分名称 Structure and Nomenclature

结构 Structure

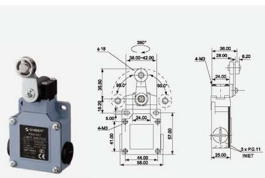
- △ 坚固金属外壳, 极大摆杆角度±95°
- △ 不锈钢滚轮, 冲头及弹簧
- △ Strong metal outer shell, swing arm max. ±95°.
- △ Stainless steel idler wheel, punch and spring.

接触形式 Contact Form

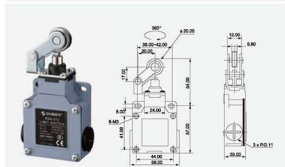




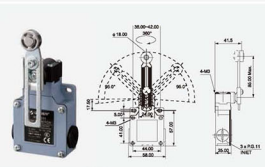
RSA-001



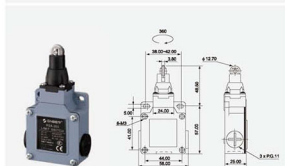
RSA-021



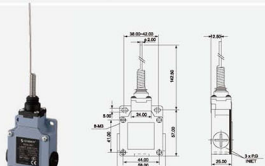
RSA-012



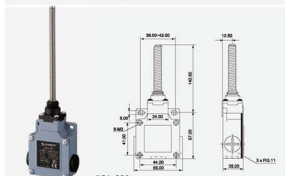
RSA-031



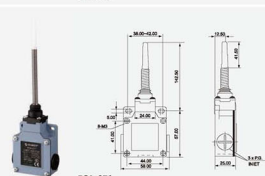
RSA-003



RSA-061



RSA-081



RSA-071

※注: 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。
※Note: This picture just for customer's references, please inquiry for details when ordering.

RHL 系列行程开关

RHL Series Travel Switch

经济型、高强度、耐油防水型限位开关
Economic, High Strength, Oil Resistant and
Waterproof Limit Switch

(尺寸单位Size Unit : mm)



(滚轮按钮型 Roller Bottom type)

特点 Characteristic

- △ 头部和盒体，以及外罩采用凹凸状的结合方式，保持其牢固性
- △ 独特的头部结构提供了大OT的平稳操作
- △ 导管开口设计易于接线
- △ 适合印刷设备、成型设备和照明设备等使用
- △ The Head, Box, and Cover mate with ridged surfaces to maintain strength
- △ A unique Head structure provides a large OT for smooth operation.
- △ Easy-to-wire conduit opening design.
- △ Ideal for application in printing machines, forming machines, and light machines.

型号说明 Model description

RHL -□□□ □

① ②

①传动杆 Actuators

500: 滚珠摆杆型 Roller lever

503: 可调式滚珠摆杆型 Adjustable roller lever

505: 可调棒式摆杆型 Adjustable rod lever

510: 密封柱塞型 Sealed plunger

520: 密封滚珠柱塞型 Sealed roller plunger

530: 盘簧型 Coil spring

②接地端子规格 Ground Terminal Specifications

0: 有后侧接地端子/M5自攻螺钉

0: A rear ground terminal or M5 tapping screw is installed

种类 Odingr Information

传动杆 Actuators		型号 Model
滚珠摆杆型 Roller lever		RHL-5000
可调式滚珠摆杆型 Adjustable roller lever		RHL-5030
可调棒式摆杆型 Adjustable rod lever		RHL-5050
密封柱塞型 Sealed plunger		RHL-5100
密封滚珠柱塞型 Sealed roller plunger		RHL-5200
盘簧型 Coil spring		RHL-5300

触点模块特性 Date

工作频率 Operating frequency	120 operations/minute max.
接触电阻 Contact resistance	25mΩ max.
绝缘强度 Dielectric strength	AC1,000V,50/60Hz,1min,同极端子间 Between terminals of the same polarity
	AC1,500V,50/60Hz,1min,在带电金属部件和接地之间 Between current-carrying metal parts and ground
	AC1,500V,50/60Hz,1min,在每个端子盒非带电金属部件之间 Between each terminal and non-current-carrying metal part
额定频率 Rated frequency	50/60 Hz
绝缘电阻 Insulation resistance	100 MΩ min.(DC500V)
容许操作速度 Operating speed	5 mm/s to 0.5 m/s
操作频率 Operating frequency	120 operations/min
寿命 Durability	电气 Electrical
	500,000 operations

RCZ 系列门式安全开关

RCZ Series Safety Switch

安全、可靠、灵活、稳定的开关
Safe, reliable, flexible and stable switch
(尺寸单位Size Unit : mm)



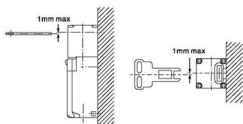
(安全开关 Safety Switch)

额定值 Ratings

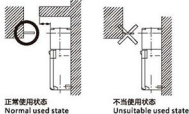
额定电压 Rated voltage	非电感性负载 Noninductive Load (A)				电感性负载 Inductive Load (A)			
	电阻性负载 Resistance Load		灯泡负载 Load Lamp		电感性负载 Inductive Load		马达负载 Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	10	3	1.5	10	5	2.5		
250 VAC	10	2	1	10	3	1.5		
400 VAC	10	1.5	0.8	3	1.5	0.8		
8 VDC	10	6	3	10	6	6		
14 VDC	10	6	3	10	6	6		
30 VDC	6	4	3	6	4	4		
125 VDC	0.8	0.2	0.2	0.8	0.2	0.2		
250 VDC	0.4	0.1	0.1	0.4	0.1	0.1		

使用注意事项 Use Attention Affair

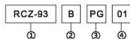
钥匙与插入孔之中心上下左右位置应在1mm以内，以避免机构磨损和破坏。
To avoid the wear and the space between the key and middle of the insert hole should be within 1mm



使用开关时，应于上方设备一挡板，以防止钥匙过于插入机构损坏，而挡板与开关间a之距离应在3mm以下，以防止不动作。
When in use, there should put a plate on the top to prevent the key overinsert into the mechanism and damage. To prevent nonmovement, the space between the plate and the switch should be under 3 mm.



型号说明 Model Designations



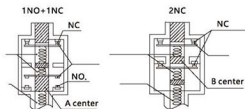
项次Designation	代号Signal	说明Description
型号Type	RCZ-93	门式安全开关Safety switch
接点型式 Type of contact blocks fitted	B	2B(2NC)
	C	1A1B(NO-NC)
接线口径牙径 Conduit entries	PG	PG 13.5XP1.5(公制牙)
	PT	PT1/2X14UNC(英制牙)
钥匙型式 Actuating keys	None	无附钥匙None
	01	平钥匙Horizontal
	02	90°钥匙Vertical
	03	03摆动钥匙Adjustable

可适配M20×1.5塞头
MM20×1.5 cable gland that can be equipped

特性 Characteristics

额定电流Rating	3A 240VAC(A300)
操作速度Operating speed	0.1m~0.5m/s
动作频率Operating frequency	30次分以下30 operations/minute
接触电阻 Contact resistance	25mΩ以下25mΩ max.(initial).
绝缘电阻 Insulation resistance	100MΩ以上(在500VDC以下) 100MΩ min.(at 500VDC)
绝缘电压 Rated insulation voltage (UI)	400V
电介强度 Dielectric strength	AC2500V/Uimp 4KV
振动 Vibration	
冲击 Shock	机械耐久: 1000m/s ² 以上 (约100G以上) 动作寿命: 300m/s ² 以上 (约30G以上) Mechanical: Approx.1000m/s ² (Approx.100G) Electrical: Approx.300m/s ² (Approx.30G)
使用温度 Ambient temperature	-10°C~+70°C
使用湿度 Ambient Humidity	<95% RH
使用寿命 Life	机械: 100万次以上 电气: 15万次以上 Mechanical:10,000,000 operations/min. Electrical:150,000 operations/min.
防水等级 Degree of protection	IP65(EN60947-5-1)
短路保护装置 Short-circuit protective device	保险丝10A 10A fuse
重量Weight	约76g Approx.76g

强制脱离机构 Required to Have Positive Machine



NC接点的强制脱离机构，作用是当接点发生熔焊时，下压钥匙机构中心，可将接点强制推开，使回路切断。(EN60947-5-1强制脱离认定)。
When the contact block get fire, press on the middle of the key structure, the NC strict leaving structure can push the contact block a way out of the movement.

RFS 系列脚踏开关

RFS Series Pedal Switch

追求高强度, 可靠性, 安全性的通用脚踏开关型
high strength, reliable, and safe universal
pedal switch in .

(尺寸单位Size Unit : mm)



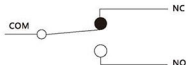
RFS-502H(加厚thicken)

型号说明 Model code

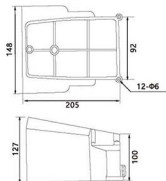
RFS □ □

产品特殊规格标注
Special specification mark
系列号(对照片展示 Pictures的型号)
Serial mark
产品设计代号
Product design mark

接线方式回路图 Wiring circuit diagram



安装尺寸 Installation dimension



产品特征 Product Features

- △ 塑胶系列外壳 Plastic series' shell
- △ 金属系列外壳 Metal series' shell
- △ 铝合金系列外壳 Aluminum alloy series' shell

额定值及性能概述 Rating & Performance description

种类 Types	产品型号 Model No.	额定负载 Rated load	内置开关(内本型号) Internal switch (GNEBER model)	引出电缆 (标准规格) Outlet cable (Standard type)	触点形式 Contact form	外质材质 Material	外形尺寸 Size
小型式 small type 固定式Fixed type	RFS-1	10A 250VAC	RV16-1C25	0.5mm ² ×3Φ×1mm	1A1B	钢板 Steel plate	见产品尺寸图 See the product size chart
	RFS-201	10A 250VAC	RV16-1C25	0.5mm ² ×3Φ×1mm	1A1B	工程塑胶ABS Engineering plastic ABS	
标准型Standard type 复位式Reset type	RFS-2	10A 250VAC	RV16-1C25	0.75mm ² ×3Φ×1mm	1A1B	铝合金 Aluminium alloy	
	RFS-3	10A 250VAC	RV16-1C25	0.75mm ² ×3Φ×1mm	1A1B	铝合金 Aluminium alloy	
护盖型 Protecting cover type	RFS-302	15A 250VAC	RZ-15GW22-B3	耐电缆固定头, 不带电缆 with cable gland, no cable	1A1B	铝合金 Aluminium alloy	
	RFS-502	15A 250VAC	RZ-15GW22-B3		1A1B	铝合金 Aluminium alloy	
	RFS-502(H)	15A 250VAC	RZ-15GW22-B3		1A1B	铝合金 Aluminium alloy	
	RFS-602	15A 250VAC	特制按钮带簧式 Special button with spring		2x1A1B	铝合金 Aluminium alloy	
通用中型 General midsize	RFS-602(H)	15A 250VAC	特制按钮带簧式 Special button with spring		2x1A1B	铝合金 Aluminium alloy	
	RFS-402	15A 250VAC	RZ-15GW22-B3		1A1B	铝合金 Aluminium alloy	

※注: 1. 本公司产品标准颜色为灰色底黄色盖, 也可以按客户指定颜色定制。

2. RFS-1, RFS-201, RFS-2, RFS-3标准电缆为1米, 也可以按客户要求定制电缆米数。

3. 本图片仅供选型时参考, 客户订购时敬请咨询, 以保证正确购买。

※note: 1. the standard color of our product is grey bottom with yellow cover, we can also customize as clients required.

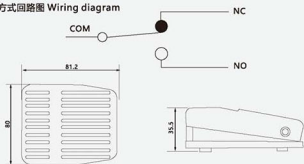
2. RFS-1, RFS-2, RFS-3, the standard cable of these types is 1 meter, and the length can be customized as clients required.

3. This picture just for customer's references, please inquiry for details when ordering.



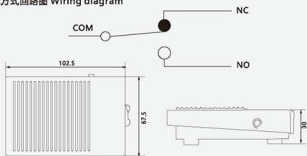
RFS-201

接线方式回路图 Wiring diagram



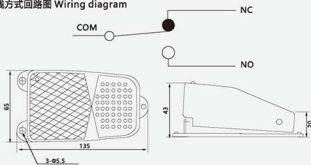
RFS-1

接线方式回路图 Wiring diagram



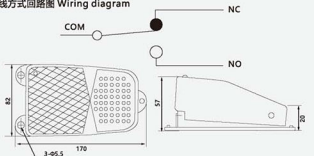
RFS-2

接线方式回路图 Wiring diagram



RFS-3

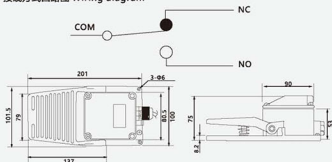
接线方式回路图 Wiring diagram





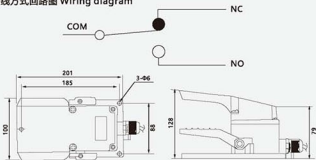
RFS-402

接线方式回路图 Wiring diagram



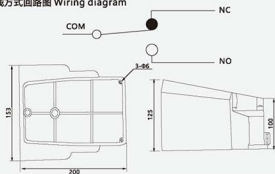
RFS-302

接线方式回路图 Wiring diagram



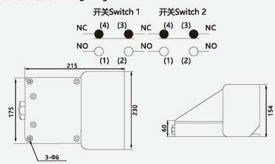
RFS-502

接线方式回路图 Wiring diagram



RFS-602

接线方式回路图 Wiring diagram



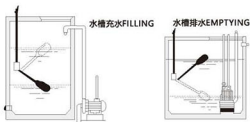
RY 系列浮球开关

RY Series Float Switch

安装及接线方法 Instructions For Installation

技术参数 Technical parameter

- △ 微型开关 Microswitch: 10 (8) 250V~10 (4) A 380V
- △ 电流开关 Switch current: $\geq 50\ 000$ (按 VDE 特殊标准测试工作开关 According VDE special standard to test the operatim switch)
- △ 保护连接 Protective connection: T70U
- △ 保护 Protection: 防水 Waterproof
- △ 最高温度 Max. temperature: 70°C
- △ 最大工作压力 Max. Working pressure: 1帕斯卡 Max.lbay
- △ 极限分断能力 Limit Circuitbreaking capacity: 250V, 1KW 直流电压 DC Voltage

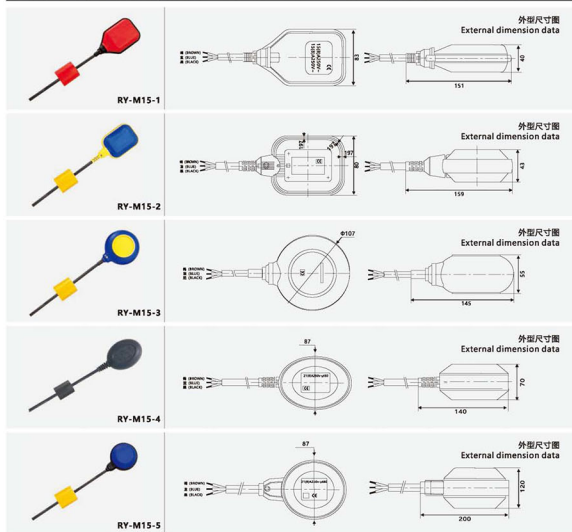


电构造 Electrical Connections

供水系统

- △ 使用“黑色”和“蓝色”的电线:
 - △ 浮球在下水位时, 接点是接通的状态
 - △ 浮球在上水位时, 接点是不通的状态
- Use wires: "Black" and "Blue" With these contacts the regulator Closes when down, Opens when up. The wire that is not used must be correctly insulated

产品型号以及内部结构图 The product model and internal structure diagram (尺寸单位 Size Unit : mm)



一般微动开关的注意事项 General micro switch precautions

安全注意事项 Safety precautions

△ 端子连接

将导线焊接到开关上时，请确保烙铁的瓦特数不超过60W。焊接开关任何部件不要超过5秒钟。如果对开关的任何部件使用瓦特数超过60W的烙铁5秒钟或更长时间，开关的性能将降低。

△ 操作

1. 请在容许操作频率或操作速度范围内使用

①. 操作速度极度滞后时，触点切换将处于不稳定状态，会造成接触故障，引起熔焊。

②. 操作速度极快时，冲击性动作将造成磨损。此外，频率较高时，触点切换将丧失随动性。

允许的额定操作速度和频率表示开关的操作可靠性。

开关的寿命是由指定的操作速度确定的。寿命因操作速度和频率而异（即使在允许范围内）。为了确定某个开关型号在特定应用中的寿命，最好在实际条件下使用该型号的样品，以进行适当的寿命测试。

确保驱动杆行程不超过过行程（OT）。必须将操作行程设置为额定OT值的70~100%。

2. 操作人员不小心将开关安装在易发生误动作或事故的地方时，请加装外罩。



3. 开关受到连续的振动和冲击时，产生的破损粉末可能导致触点接触不良和动作失常、耐久性下降等问题。过大的振动和冲击可能导致触点误动作或损坏。因此请将开关安装在不会受到振动和冲击的位置，以及不会发生共振的方向上。

4. 使用银触点时如果长期处于低频率使用或者微小负载使用状态，触点表面生成的硫化膜不会被破坏，导致触点接触不良。因此请使用带金触点的微小负载开关。

5. 请不要在硫化气体(H₂S, S₀₂)、氨气(H₂)、硝酸气体(HNO₃)、氯气(Cl₂)等有害气体和高温高湿环境中使用开关，以免发生触点接触不良和腐蚀引起的磨损等功能障碍。

6. 开关包含银触点。如果在存在硅气体的环境中使用开关，则电弧能量会使氧化硅(SiO₂)堆积在触点上，导致接触不良。开关周围有硅油、硅填剂、硅电线等硅制品时，请通过触点保护电路来抑制电弧并移除产生硅气体的源头。

△ Terminal Connection

When welding the wire to the switch, make sure that the watt of the soldering iron does not exceed 60W. Do not weld any part of the switch for more than 5 seconds. If any part of the switch is used with a wattage of more than 60W for 5 seconds or longer, the performance of the switch will be reduced.

△ Operation

1. Please use within the permissible operating frequency or operating speed range

①. When the operating speed is extremely lag, the contact switching will be in an undisclosed state, which will cause contact failure and cause melting.

②. When operating at very high speed, impact action will cause damage. In addition, when the frequency is higher, the contact switching will lose the follow-up.

The allowable operating speed and frequency indicate the operational reliability of the switch.

The life of the switch is determined by the specified operating speed. Life varies with speed and speed of operation even within permissible limits. To determine the lifetime of a particular switch model in a particular application. It is better to use the sample of the model in question under practical conditions for proper life testing.

Ensure that the drive rod travel does not exceed the over stroke (OT). The operating stroke must be set to 70 to 100% of the rated OT value.

2. If the operator accidentally installs the switch in a place prone to misoperation or accidents, install an outer cover.

3. When the switch is subjected to continuous vibration and impact, the damaged powder produced may lead to poor contact and abnormal action, durability decline and other problems. Excessive vibration and shock may result in contact misoperation or damage. Therefore, please install the switch in a position that will not be subjected to vibration and shock, and in a direction that will not resonate.

4. If the use of silver contacts for a long time in low frequency use or small load use state, the sulfide film generated on the surface of the contact will not be destroyed, resulting in poor contact. Therefore, use a small load switch with gold contact.

5. Do not use switches in hostile gases such as hydrophobic gas (H₂S, S₀₂), ammonia gas (H₂), nitric gas (HNO₃), chlorine gas (Cl₂) or in high temperature and humidity environments to avoid functional obstacles such as poor contact and damage caused by corrosion.

6. The switch contains contacts. If the switch is used in the presence of silicon gas, arc energy will cause silicon oxide (SiO₂) to build up on the contacts, resulting in poor contact. When silicon products such as silicon oil, silicon filler, and silicon wire are around the switch, use the contact protection circuit to suppress the arc and remove the source of silicon gas.

使用注意事项 Precautions for use

△ 安装场所

- ① 请不要在易燃性气体、爆炸性气体等环境中单独使用开关。开合时产生的电强和热量等可能导致着火或爆炸。
- ② 若开关不是防水密封结构，在油或水飞溅、飞散或有尘埃附着的地方，请用保护盖来防止直接飞溅。

△ 操作

请在容许操作频率或操作速度范围内使用

- ① 操作速度极度滞后时，接点切换将处于不稳定状态，会造成接触故障，引起熔合。
- ② 操作速度极快时，冲击性动作将造成破损。此外，频率较高时，接点切换将丧失随动性。

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确保驱动杆行程不超过过行程（OT），必须将操作行程设置为额定OT值的70~100%。



- ③ 请将开关安装在不会直接接触到切削屑或尘埃的位置。必须保证驱动杆和开关本体上不会堆积切削屑和泥状物质。



- ④ 请不要在有热水（60℃以上）的地方和水蒸气中使用请不要在指定的温度和大气条件之外使用开关。

△ 安装

使用带平垫圈或弹簧垫圈的M4安装螺钉，牢固安装开关。将螺钉拧紧至转矩1.18到1.47N·m。

△ 接线

- ① 接线时，请使用与施加电压、通电流相符的电线尺寸。
- ② 使用烙铁焊接时，铁尖部温度应为380℃以下。在焊接不完全的状态下使用时，会引起异常发热，造成烧损。
- ③ 焊接温度与时间应为350℃，5s以内，或380℃，3s以内，如长时间加热，会使外壳化，导线外皮烧蚀等，使开关性能劣化。

△ Installation site

- ① Please do not use the switch alone in the environment of flammable gas and explosive gas. The electric strength and heat generated during opening and closing may lead to fire or explosion.
- ② The switch is not waterproof seal structure. Therefore, use protective covers to prevent direct droplets where oil or water is sprayed, dispersed or attached.

△ operation

Please use within the permissible operating frequency or operating speed range

- ① When the operating speed is extremely lagging, the contact switching will be in an undisclosed state, which will cause contact failure and cause melting.
- ② When the operating speed is very fast, the impact action will cause damage. In addition, when the frequency is higher, the contact switching will lose the follow-up.

The allowable operating speed and frequency indicate the operational reliability of the switch.

The life of the switch is determined by the specified operating speed. Life varies with speed and speed of operation even within permissible limits. To determine the lifetime of a particular switch model in a particular application.

It is better to use the sample of the model in question under practical conditions for proper life testing.

Ensure that the drive rod travel does not exceed the over stroke (OT). The operating stroke must be set to 70 to 100% of the rated OT value.

- ③ Please install the switch in a position that does not come into direct contact with chips or dust. There must be no accumulation of cutting chips and mud on the drive rod and switch body.
- ④ Do not use the switch in hot water above 60°C or in water vapor. Do not use the switch outside the specified temperature and atmospheric conditions.

△ Install

Secure the switch using M4 mounting screws with flat or spring washers. Tighten the screw until torque is 1.18 to 1.47N·m.

△ Wiring

- ① When connecting cables, please use a wire size consistent with the applied voltage and current.
- ② When using a soldering iron to weld, the temperature of the iron tip should be below 380°C. In the use of incomplete welding profile, will cause abnormal heating, resulting in burning.
- ③ Welding temperature and time should be 350°C, within 5s, or 380°C, 3s, such as long time heating, will make the shell, wire skin burning step, so that the switch performance deterioration.

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