

Lema Electric

Switches for Control System
Product Catalog

控制开关 产品手册



乐马
LEMA



Company Profile

公司简介

Zhejiang Lema Electrics Co., Ltd. is located at Wenzhou city of Zhejiang province in China.

LEMA specialized in research and development, manufacture and sales of micro switches, limit switches, push button switches, foot switches, toggle switches, over-load circuit protection breakers, AC power sockets.

With about 30 years professional experience of developing and producing switches, LEMA has become one of professional control switch manufacture in China with a factory of about 11000 square meters of floor space.

Our Positioning

- * We focus on developing and producing high quality control switches and continues to improve the products.
- * We accept customization of products according to client's special needs.
- * We try to improve the cost effective of products to save cost for our clients.

Our Strengths

- * We have a professional team of production and R&D, and able to customize special products to meet client's requirements.
- * We create a professional production process and develop production facilities by ourselves to improve productivity.
- * We inspect the quality of products from incoming materials, components producing and products assembling, 100% of finished products are inspected before go to market.
- * We develop and produce all metal stamping parts and plastic injection parts for switches, which can efficiently control the quality of switches and decline the production cycle.
- * We have a laboratory with professional facilities, which could test the characteristics of the products according to the standards.
- * Main products have attained certificates such as CCC, UL, VDE, CE etc., and also meet RoHS standard.

浙江乐马电气有限公司座落于浙江省温州市。公司创办于1986年。

乐马致力于研发、生产、销售工控电气开关。公司核心产品有微动开关、行程（限位）开关、按钮开关、脚踏开关、钮子开关、过载保护器、AC电源插座。

经过近30年的稳步发展，乐马已成为国内规模较大的控制开关专业生产厂家。公司目前占地面积11000多平方米。

我们的定位

- * 专注于高品质控制开关产品的研发生产与持续改进
- * 接受客户特殊要求定制，满足特殊应用需求
- * 提高产品性价比，为客户节约成本

我们的优势

- * 拥有专业的生产、研发团队，可根据客户需求定制产品
- * 制定专业的生产工艺并自主研发生产设备
- * 所有冲压、注塑配件自主研发生产，有效保证了产品品质和生产周期
- * 通过原材料入库，配件加工和成品组装，实行多环节品质控制，产品出厂检验实行100%全检，确保出厂产品品质
- * 拥有专业的实验室，可按照标准要求测试产品性能
- * 核心产品已取得 CCC, UL, VDE, CE 等认证，并符合 RoHS 标准

Contents

目录

	KW7	系列微动开关 series micro switch	1
	KW7N	系列微动开关 series micro switch	9
	KW7F	系列防水微动开关 series water proof micro switch	13
	KW12	系列微动开关 series micro switch	18
	KW12F	系列防水微动开关 series water proof micro switch	24
	LZ15	系列微动开关 series micro switch	27
	LZ5	系列密封行程开关 series sealed limit switch	34
	LZ7	系列密封行程开关 series sealed limit switch	38
	LZ8	系列小型行程开关 series mini limit switch	42
	LHL	系列紧凑型行程开关 series compact limit switch	47
	LWL	系列通用行程开关 series general limit switch	52
	LT(LT1.LT2.LT3)	系列钮子开关 series toggle switch	58
	LF	系列脚踏开关 series foot switch	64
	IPZ	系列AC电源插座 series AC power socket	68
	LMB1	系列过载保护断路器 series overload protection breaker	69
	PBS	系列按钮开关 series push button switch	70

series micro switch

KW7 系列 微动开关

KW7



Features 特点

- * 多种杠杆和接线端子可供选择
- * 动作灵敏，紧凑型设计，适合微小空间
- * 使用寿命长，可靠性高，可降低使用成本
- * 多种额定参数值及耐温等级可供选择
- * 广泛应用于家用电器，电子设备，汽车电子，自动化等领域
- * 已取得CE，CQC，UL，VDE，ENEC认证
- * Various levers and terminals are available.
- * Snap action, compact design, suit for small space.
- * Long operating life, high reliability, which could save the cost.
- * Various rating and temperature resistance degree are available.
- * Widely applied in home appliance, electronic device, auto electronic, automation equipment etc.
- * CE, CQC, UL, VDE, ENEC approvals.

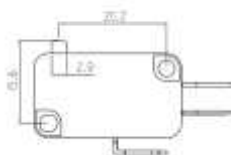
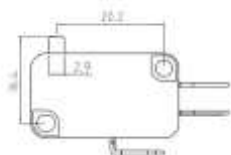
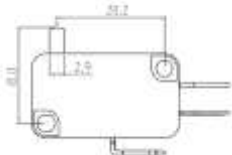
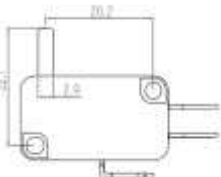
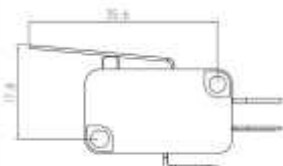
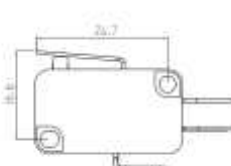
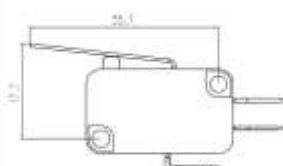
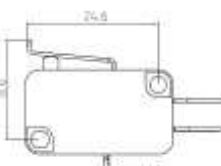
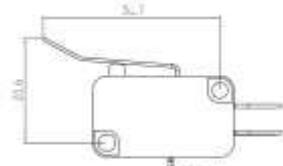
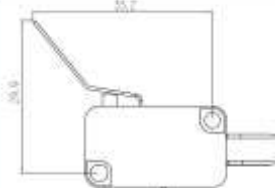
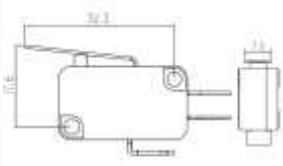
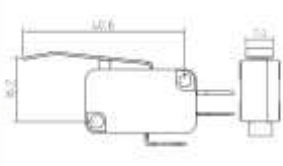
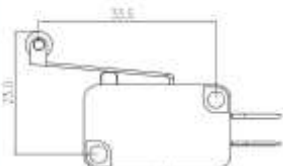
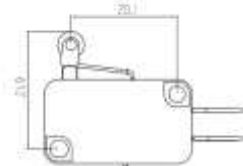
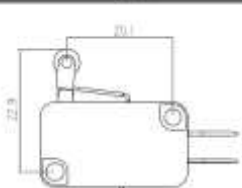
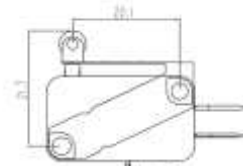
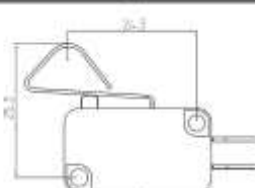
Characteristics 产品特性

Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻		100 MΩ min. (At 500V DC) 100 MΩ 最小 (在 500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Shock resistance 耐冲击	Destruction 破坏	O.F. > 0.5N: 1000m/s ² (Approx. 100G) max. O.F. ≤ 0.5N: 400m/s ² (Approx. 40G) max. 动作力 > 0.5N: 1000m/s ² (约100G) 最大 动作力 ≤ 0.5N: 400m/s ² (约40G) 最大
	Malfunction 故障	O.F. > 0.5N: 200m/s ² (Approx. 20G) max. O.F. ≤ 0.5N: 100m/s ² (Approx. 10G) max. 动作力 > 0.5N: 200m/s ² (约20G) 最大 动作力 ≤ 0.5N: 100m/s ² (约10G) 最大
Vibration resistance 抗振性		10~55Hz, 1.5mm double amplitude 双振幅
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	50,000 operations min. 50,000 次 最小
Ambient temperature 环境温度		-25℃ to +85℃
Ambient humidity 环境湿度		≤85%RH
Operating frequency 动作频率	Mechanical 机械	60 times/min 60 次/分
	Electrical 电气	25 times/min 25次/分
Operating speed 动作速度		0.1mm~1m/s
Protection degree保护等级		IP40

Product Ordering 产品选型

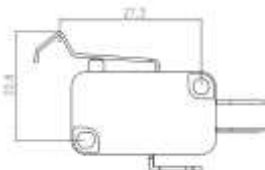
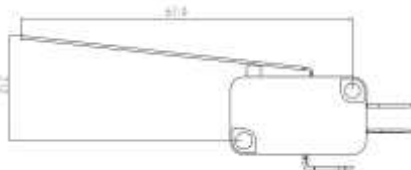
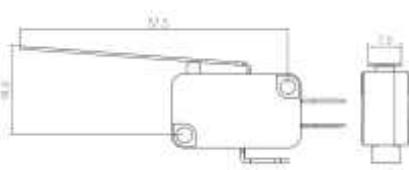
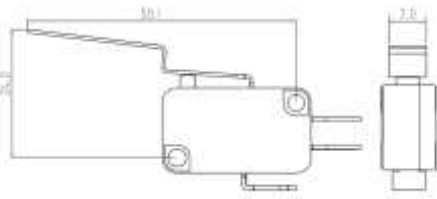
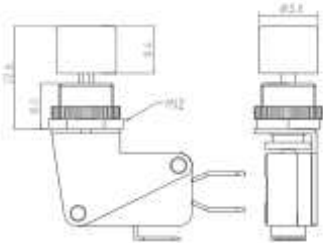
KW7	-	1	2	3	-	4	5
KW7 series Micro switch KW7 系列微动开关		Lever type 杠杆类型	Terminal type 接线端子类型	Contact form 接触方式		Rating 额定值	Operating force 动作力

Lever Type 杠杆类型

Code代号	0	01	02	03
Dimensions 尺寸图				
Code代号	1	11	12	13
Dimensions 尺寸图				
Code代号	14	15	11	11/2
Dimensions 尺寸图				
Code代号	2	22	23	24
Dimensions 尺寸图				
Code代号	3	32	33	4
Dimensions 尺寸图				

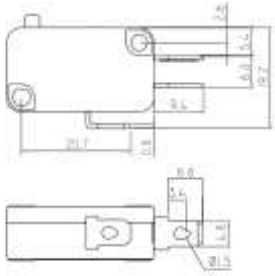
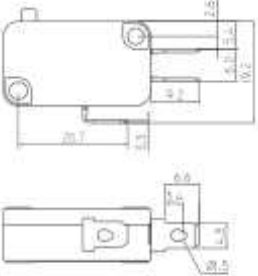
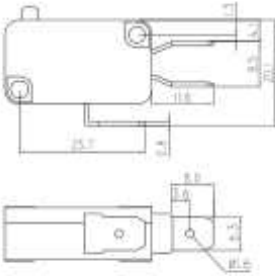
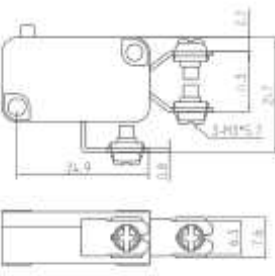
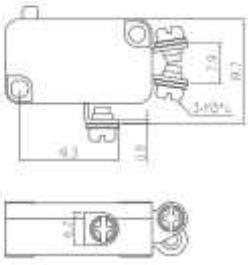
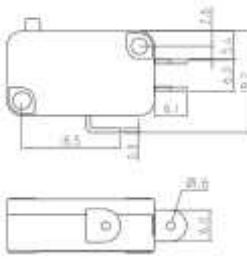
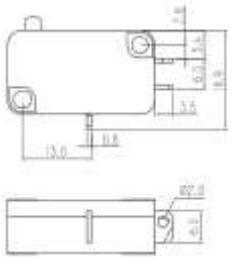
KW7 series micro switch

Code代号	42	5	51	51
Dimensions 尺寸图				
Code代号	512	7	72	8
Dimensions 尺寸图				
Code代号	82	83	9	
Dimensions 尺寸图				
Code代号	93	94	95	
Dimensions 尺寸图				
Code代号	951	953	96	
Dimensions 尺寸图				
Code代号	961	962	97	
Dimensions 尺寸图				

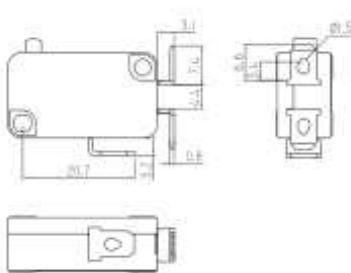
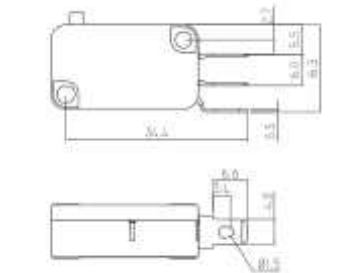
Code代号	971	98	91
Dimensions 尺寸图			
Code代号	912	D	
Dimensions 尺寸图			

All the switches with levers are installed with a "0" type button. Levers also can be customized by requirement.
带杠杆开关一般安装代号为 "0" 通用按钮。杠杆可以按照实际需求定做。

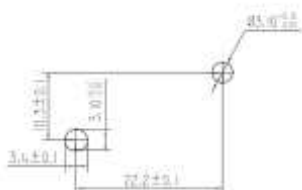
Terminal Type 接线端子类型

None 无表示	T	U	L
#187 quick connect/solder terminal (T=0.8) #187快插/焊接端子	#187 quick connect/solder terminal (T=0.5) #187快速连接端子	#250 quick connect terminal (T=0.8) #250快速连接端子	Screw terminal 螺丝端子
			
L1	Z	Y	
Screw terminal 螺丝端子	Solder terminal 焊接端子	Solder terminal 焊接端子	
			

KW7 series micro switch

H	D
#187 quick connect/solder terminal (T=0.8) #187快插/焊接端子 	Side common terminals 公共端子在侧面 

Mounting Holes Dimensions 安装孔尺寸



Contact Form 接触方式

Code 代号	None 无表示	B	C
Contact form 接触方式	SPDT 双掷型	SPDT-NC 常闭型	SPDT-NO 常开型
Circuit diagram 线路图形			

Rating 额定值

Code 代号	A	B	C	D	E	F	G	H
Rating 额定值	1A,125/250V AC	3A,125/250V AC	5A,125/250V AC	6A,125/250V AC	8A,125/250V AC	10A,125/250V AC	16A,125/250V AC	21A,125/250V AC

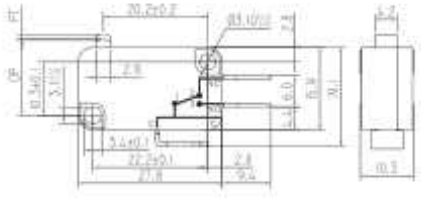
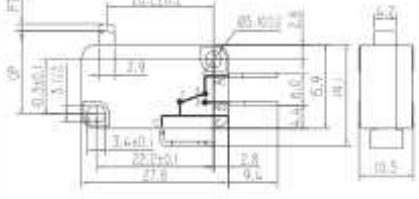
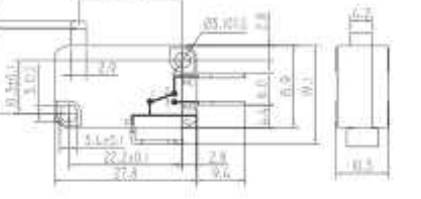
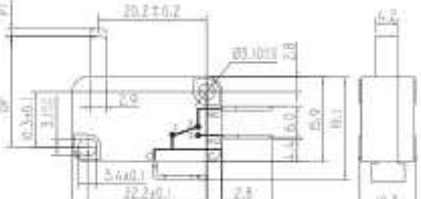
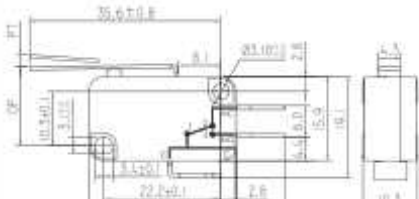
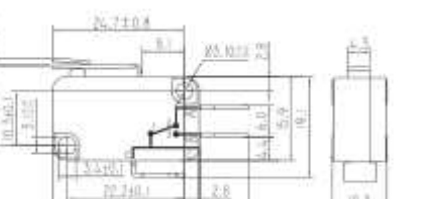
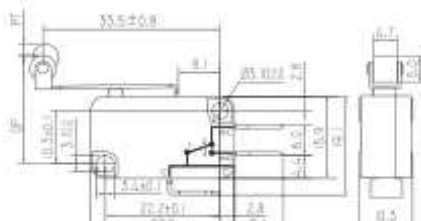
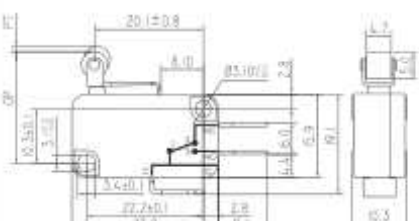
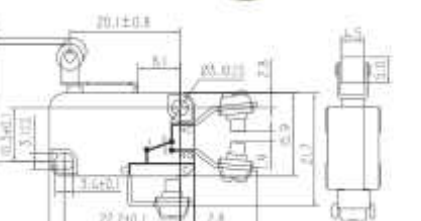
Other rating without of this form can be customized by requirement.
其它种定值可以安装实际需求定制。

Operating Force 动作力

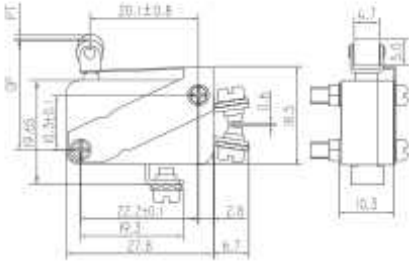
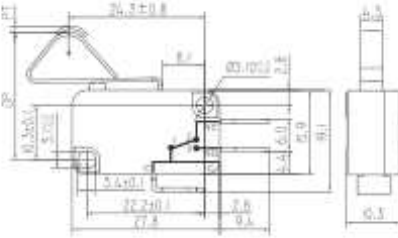
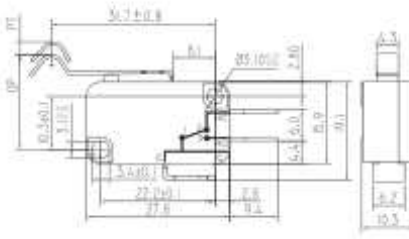
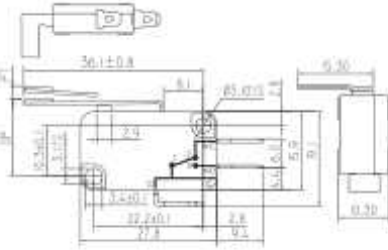
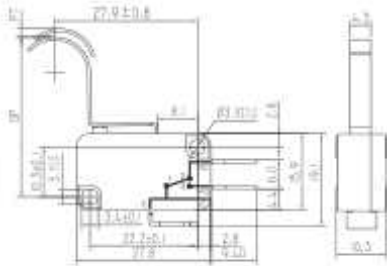
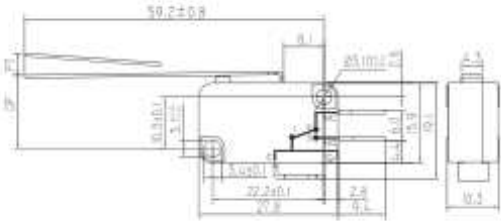
Code 代号	01	02	03	04	05	06	07	08	09	10
Operating force 动作力	10-30gf	30-50gf	50-100gf	100-150gf	150-200gf	190-260gf	200-280gf	250-320gf	300-400gf	350-450gf

The operating force above are measured from push button side, the operating force of the switch with lever will be calculated base on its operating force on the push button side.
动作力为不带杠杆按钮按压力测量值。带杠杆动作力按照其相应的杠杆进行换算。

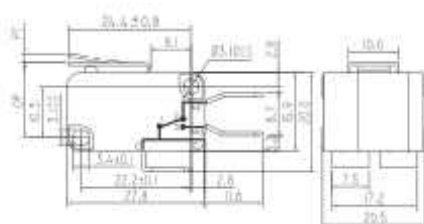
Other operating force not showed in this form can be customized by requirement.
其它动作力可以根据实际需求定制。

KW7-0-□□  	KW7-01-□□  	KW7-02-□□  
KW7-03-□□  	KW7-1-□□  	KW7-11-□□  
KW7-2-□□  	KW7-3-□□  	KW7-32L-□□  

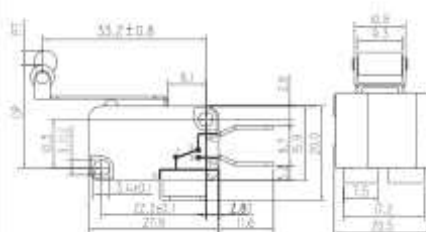
KW7 series micro switch

KW7-33L1-□□  	KW7-4-□□  	KW7-5-□□  
KW7-7-□□  	KW7-82-□□  	KW7-9-□□  

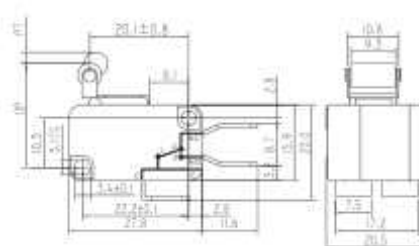
KW7-1 □ □ U-□ □



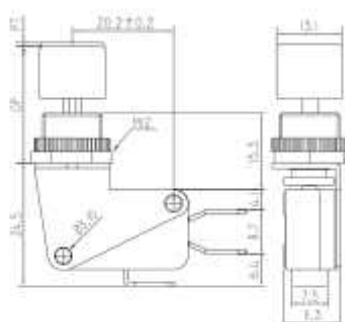
KW7-2 □ □ U-□ □



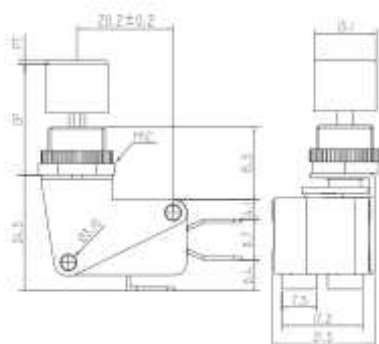
KW7-3 □ □ U-□ □



KW7-DU-□ □



KW7-D2U-□ □



series micro switch
KW7N 系列 微动开关

KW7N



Features 特点

- * 多种杠杆和接线端子可供选择
- * 动作灵敏, 紧凑型设计, 适合微小空间
- * 使用寿命长, 可靠性高
- * 多种额定参数值可供选择
- * 广泛应用于家用电器, 电子设备, 汽车电子, 自动化等领域
- * 已取得CQC, CE, UL认证
- * Various levers and terminals are available.
- * Snap action, compact design, suit for small space.
- * Long operating life, high reliability
- * Various rating are available.
- * Widely applied in home appliance, electronic device, auto electronic, automation equipment etc.
- * CQC, CE, UL approvals.

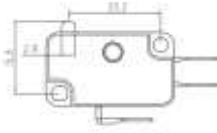
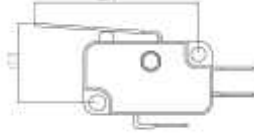
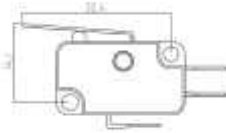
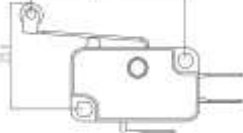
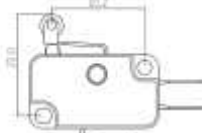
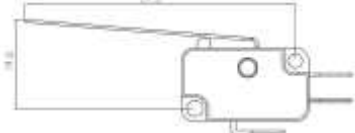
Characteristics 产品特性

Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻		100 MΩ min. (At 500V DC) 100 MΩ 最小 (在 500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Shock resistance 耐冲击	Destruction 破坏	O.F. > 0.5N: 1000m/s ² (Approx. 100G) max. O.F. ≤ 0.5N: 400m/s ² (Approx. 40G) max. 动作力 > 0.5N: 1000m/s ² (约100G) 最大 动作力 ≤ 0.5N: 400m/s ² (约40G) 最大
	Malfunction 故障	O.F. > 0.5N: 200m/s ² (Approx. 20G) max. O.F. ≤ 0.5N: 100m/s ² (Approx. 10G) max. 动作力 > 0.5N: 200m/s ² (约20G) 最大 动作力 ≤ 0.5N: 100m/s ² (约10G) 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm double amplitude 双振幅
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	50,000 operations min. 50,000 次 最小
Ambient temperature 环境温度		- 25℃ to +85℃
Ambient humidity 环境湿度		≤ 85%RH
Operating frequency 动作频率	Mechanical 机械	60 times/min 60 次/分
	Electrical 电气	25 times/min 25次/分
Operating speed 动作速度		0.1mm-1m/s
Protection degree 保护等级		IP40

Product Ordering 产品选型

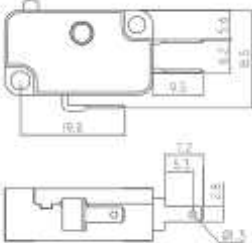
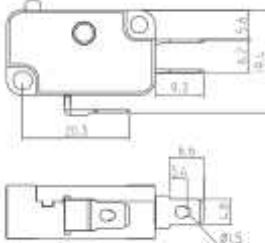
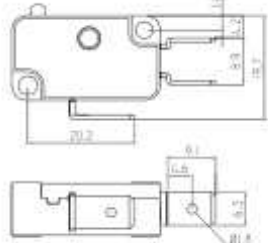
KW7N	1	2	3	4	5
KW7N series Micro switch KW7N 系列微动开关	Lever type 杠杆类型	Terminal type 接线端子类型	Contact form 接触方式	Rating 额定值	Operating force 动作力

Lever Type 杠杆类型

Code 代号	0	1	1I	2
Dimensions 尺寸图				
Code 代号	3	5I	9	
Dimensions 尺寸图				

All the switches with levers are installed with a "0" type button. Levers also can be customized by requirement.
带杠杆开关一般安装代号为 "0" 通用按钮。杠杆可以按照实际需求定做。

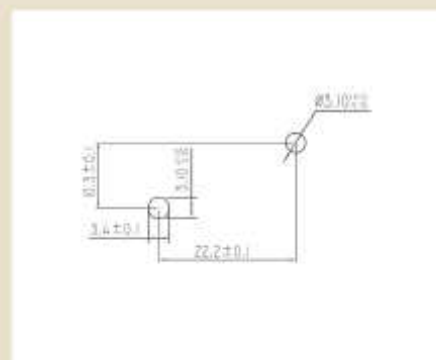
Terminal Type 接线端子类型

R	T	U
#110 quick connect terminal (T=0.5) #110 快插端子	#187 quick connect /solder terminal (T=0.5) #187 快插/焊接端子	#250 quick connect terminal (T=0.8) #250 快速连接端子
		

KW7N series micro switch

B	C
#187 quick connect /solder terminal (T=0.8) #187 快插端子	#187 quick connect /solder terminal (T=0.5) #187 快插端子

Mounting Holes Dimensions 安装孔尺寸



Contact Form 接触方式

Code 代号	None 无表示	B	C
Contact form-接触方式	SPDT 双投型	SPDT-NC 常闭型	SPDT-NO 常开型
Circuit diagram 线路图形			

Rating 额定值

Code 代号	D	F	G
Rating 额定值	6A 125/250V AC	10A 125/250V AC	16A , 125/250V AC 3A , 400V AC

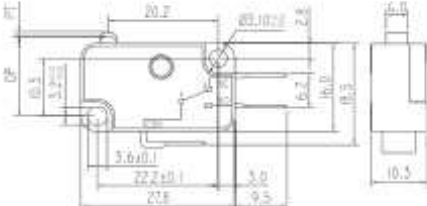
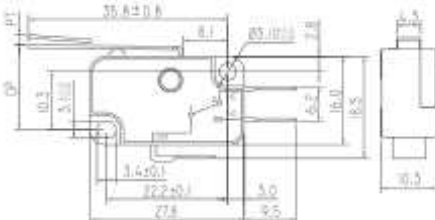
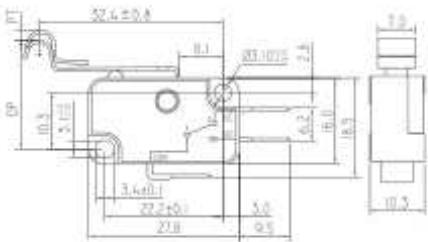
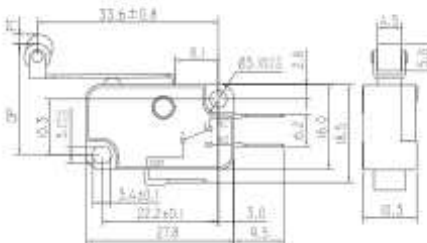
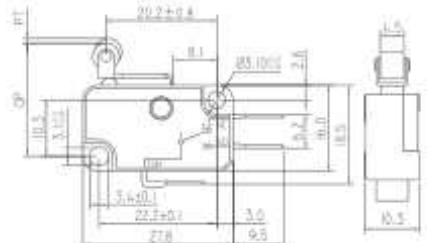
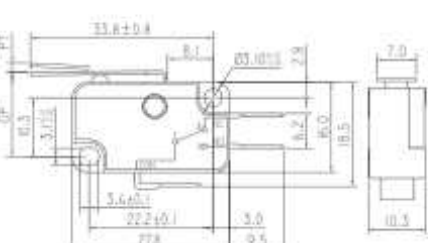
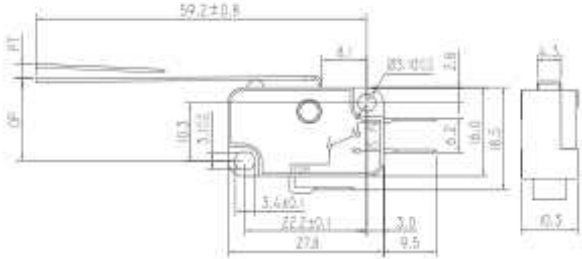
Other rating without of this form can be customized by requirement.
其它额定值可以安装实际需求定制。

Operating Force 动作力

Code 代号	01	02	03	04
Operating force 动作力	100~200gf	201~300gf	301~400gf	401~500gf

The operating force above are measured from push button side, the operating force of the switch with lever will be calculated base on its operating force on the push button side.
动作力为不带杠杆从按钮位置测量得, 带杠杆动作力按照其相应的杠杆进行换算。

Other operating force not showed in this form can be customized by requirement.
其它动作力可以安装实际需求定制。

KW7N-0T-□□	KW7N-1T-□□	KW7N-1iT-□□
 	 	 
KW7N-2T-□□	KW7N-3T-□□	KW7N-5iT-□□
 	 	 
KW7N-9T-□□		
 		

series water proof micro switch
KW7F 系列 防水微动开关

KW7F



Features 特点

- * 紧凑型设计，动作灵敏，适合微小空间
- * 使用寿命长，稳定性高
- * 防水、防尘结构设计(IP67)，可以应用在潮湿环境中
- * 应用于家用电器，电子设备，汽车电子，办公设备，自动化设备等领域
- * 已取得CE,CQC认证
- * Compact design, snap action, suit for small space.
- * Long operating life, high reliability
- * Water proof, dust proof design(IP67),suit for wet environment.
- * Widely applied in home appliance, electronic device, auto electronic,office equipment, automation equipment etc.
- * CE, CQC approvals

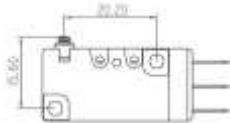
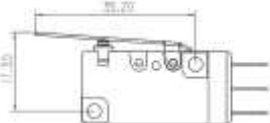
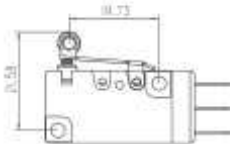
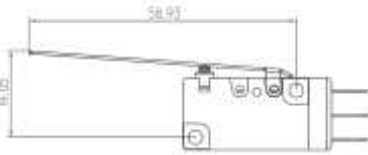
Characteristics 产品特性

Initial contact resistance 初始接触电阻	Without lead wire 不带导线	30m Ω max. 30m Ω 最大
	With lead wire 带导线	100m Ω max. 100m Ω 最大
Initial insulation resistance 初始绝缘电阻		100 M Ω min. (At 500V DC) 100 M Ω 最小 (在 500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Shock resistance 耐冲击	Destruction 破坏	O.F. > 0.5N: 1000m /s ² (Approx.100G) max. O.F. $\leq$ 0.5N: 400m /s ² (Approx.40G) max. 动作力 > 0.5N: 1000m /s ² (约100G) 最大 动作力 $\leq$ 0.5N: 400m /s ² (约40G) 最大
	Malfunction 故障	O.F. > 0.5N: 200m /s ² (Approx.20G) max. O.F. $\leq$ 0.5N: 100m /s ² (Approx.10G) max. 动作力 > 0.5N: 200m /s ² (约20G) 最大 动作力 $\leq$ 0.5N: 100m /s ² (约10G) 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm double amplitude 双振幅
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	10,000 operations min. 10,000 次 最小
Ambient temperature 环境温度		- 40℃ to +85℃
Ambient humidity 环境湿度		$\leq$ 85%RH
Operating frequency 动作频率	Mechanical 机械	60 times/min 60 次/分
	Electrical 电气	25 times/min 25次/分
Operating speed 动作速度		0.1mm-1m/s
Protection degree 保护等级		IP67

Product Ordering 产品选型

KW7F	-	1	2	3	-	4	5
KW7F series micro switch KW7F 系列微动开关		Lever type 杠杆类型	Terminal type 接线端子类型	Contact form 接触方式		Rating 额定值	Operating force 动作力

Lever Type 杠杆类型

Code代号	0	1	11	2
Dimensions 尺寸图				
Code代号	3	5	9	
Dimensions 尺寸图				

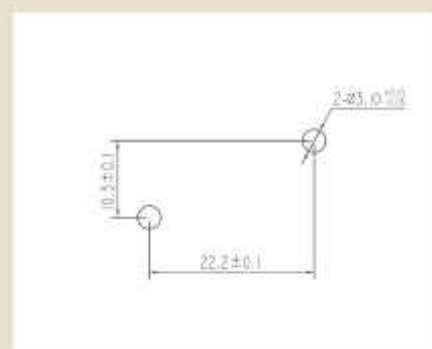
All the switches with levers are installed with a "O" type button. Levers also can be customized by requirement.
带杆开关一般安装按钮为“O”通用按钮，杆杆可以根据需求来定做。

Terminal Type 接线端子类型

T	L
187# quick connect /solder terminal (T=0.5) #187快插/焊接端子	Lead wire type 导线型

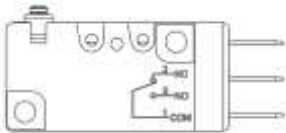
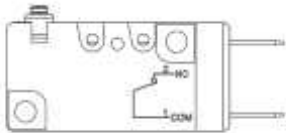
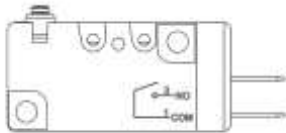
Standard lead wire type with length 300mm, other length are available for customizing
标准导线长度为300mm, 其它长度可以接受定制。

Mounting Holes Dimensions 安裝孔尺寸



KW7F series water proof micro switch

Contact Form 接触方式

Code 代号	None 无表示	B	C
Contact form 接触方式	SPDT 双投型	SPDT-NC 常闭型	SPDT-NO 常开型
Circuit diagram 线路图形			

Rating 额定值

Code 代号	C	D	F
Rating 额定值	5A 125/250V AC 5A 30V DC	6A 125/250V AC 5A 30V DC	10A 125/250V AC 5A 30V DC

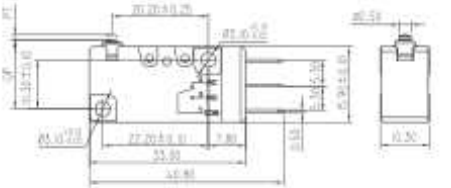
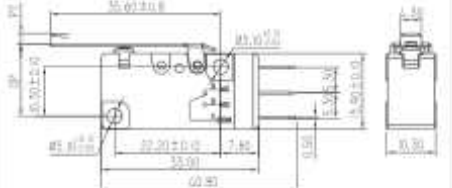
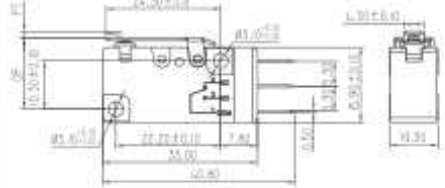
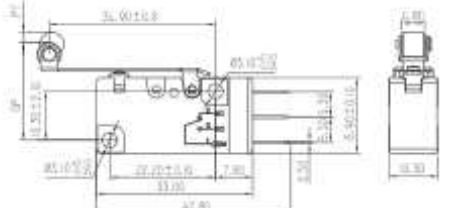
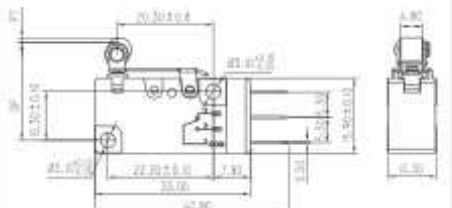
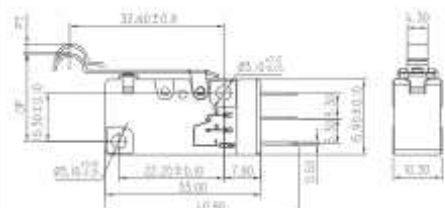
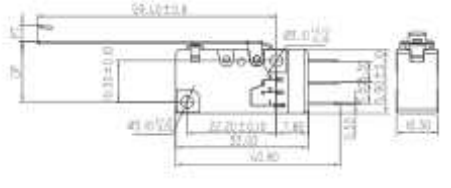
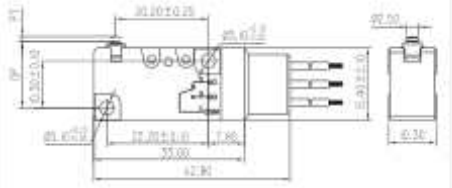
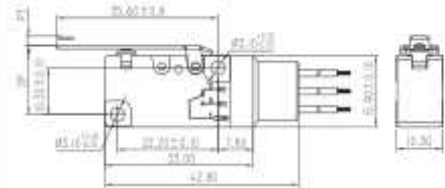
Other rating without of this form can be customized by requirement.
其它额定值可以安装实际需求定制。

Operating Force 动作力

Code 代号	01	02	03	04	05
Operating force 动作力	0-50gf	51-100gf	101-150gf	151-200gf	201-300gf

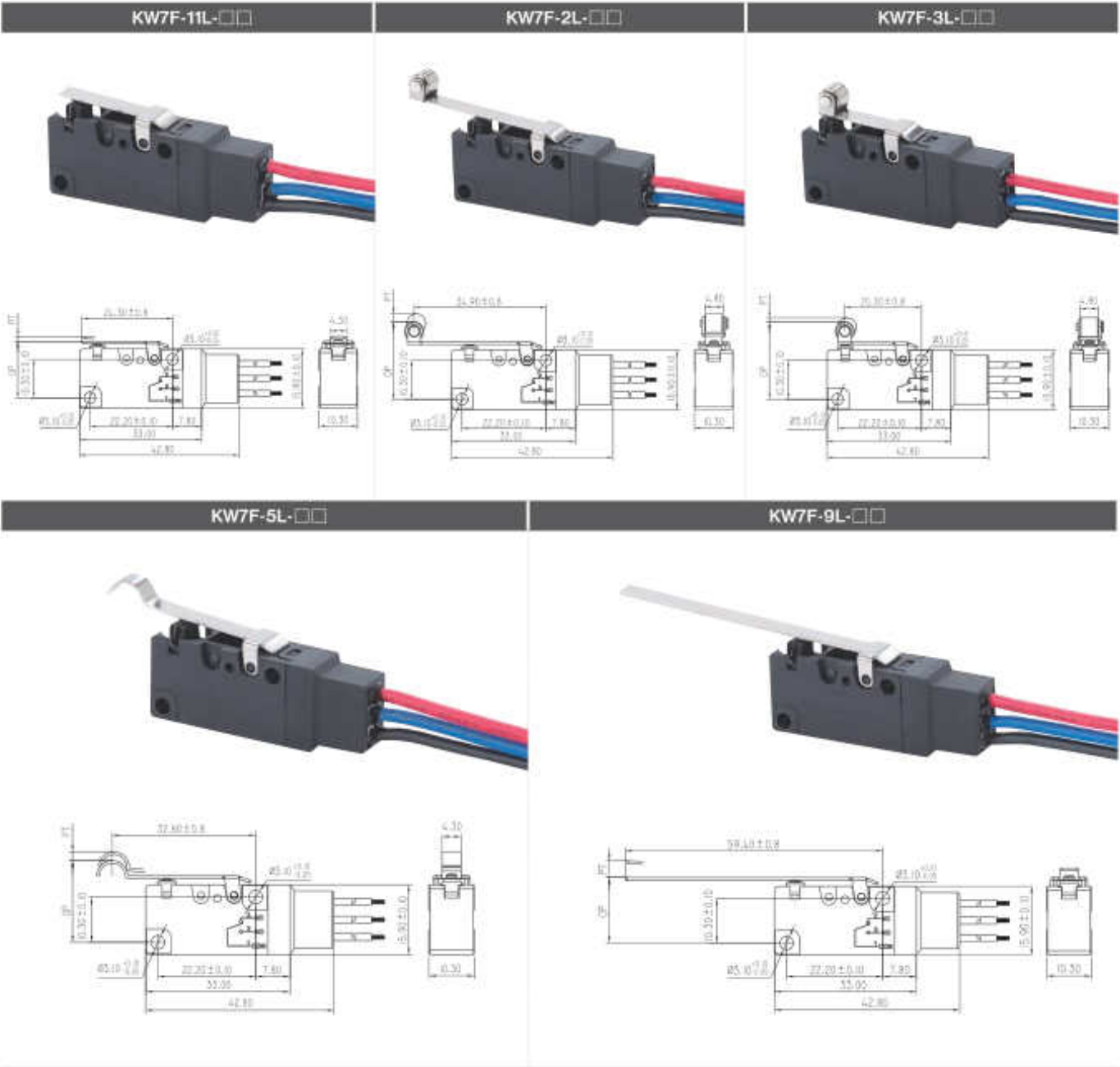
The operating force above are measured from push button side, the operating force of the switch with lever will be calculated base on its operating force on the push button side.
动作力为不带杠杆从按钮位置测得，带杠杆动作力按照其相应的杠杆进行换算。

Other operating force not showed in this form can be customized by requirement.
其它动作力可以安装实际需求定制。

KW7F-0T-□□	KW7F-1T-□□	KW7F-11T-□□
 	 	 
KW7F-2T-□□	KW7F-3T-□□	KW7F-5T-□□
 	 	 
KW7F-9T-□□	KW7F-0L-□□	KW7F-1L-□□
 	 	 

KW7F series water proof micro switch

KW7F 系列 防水微动开关



series micro switch
KW12 系列 微动开关



KW12



Features 特点

- * 紧凑型设计，体积较小，适合狭小空间
- * 动作快速，灵敏，微小间距
- * 使用寿命长，可靠性高
- * 多种杠杆和接线端子可供选择
- * 广泛应用于家电，电子设备，汽车电子，电动工具等领域
- * 已取得CQC,CE,UL,VDE,ENEC认证
- * Compact design, small size, suit for small space.
- * Snap action, high sensitivity and small contact gap.
- * Long operating life, high reliability.
- * Various levers and terminals are available.
- * Widely applied in home appliance, electronic device, auto electronic, electric tool etc.
- * CQC,CE,UL,VDE,ENEC approvals.

Characteristics 产品特性

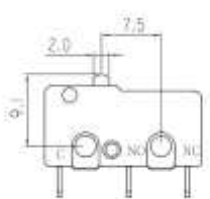
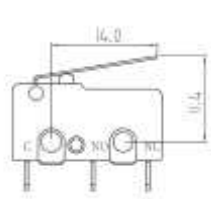
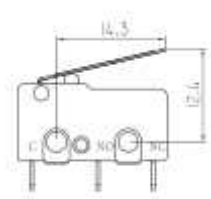
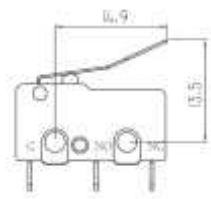
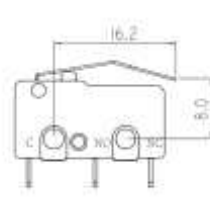
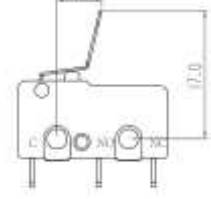
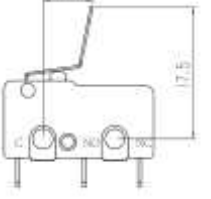
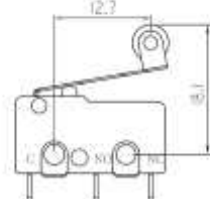
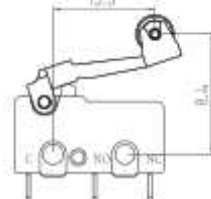
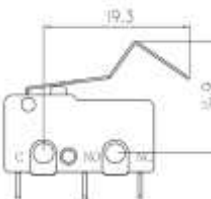
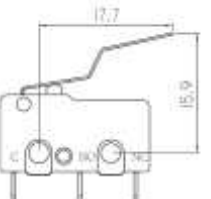
Initial contact resistance 初始接触电阻		25m Ω max. 25m Ω 最大
Initial insulation resistance 初始绝缘电阻		100 M Ω min. (At 500V DC) 100 M Ω 最小 (在 500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms ; 50/60Hz for 1 min 1,000Vrms , 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms , 50/60Hz for 1 min 1,500Vrms , 50/60Hz 持续1分钟
Shock resistance 耐冲击	Destruction 破坏	O.F. > 0.5N: 1000m /s ² (Approx.100G) max. O.F. $\leq$ 0.5N: 400m /s ² (Approx.40G) max. 动作力 > 0.5N: 1000m/s ² (约100G) 最大 动作力 $\leq$ 0.5N: 400m /s ² (约40G) 最大
	Malfunction 故障	O.F. > 0.5N: 200m /s ² (Approx.20G) max. O.F. $\leq$ 0.5N: 100m /s ² (Approx.10G) max. 动作力 > 0.5N: 200m /s ² (约20G) 最大 动作力 $\leq$ 0.5N: 100m /s ² (约10G) 最大
Vibration resistance 抗振性		10-55Hz , 1.5mm double amplitude 双振幅
Operating life 使用寿命	Mechanical life 机械寿命	500,000 operations min. 500,000 次 最小
	Electrical life 电气寿命	50,000 operations min. 50,000 次 最小
Ambient temperature 环境温度		- 25°C to +85°C
Ambient humidity 环境湿度		$\leq$ 85%RH
Operating frequency 动作频率	Mechanical 机械	60 times/min 60 次/分
	Electrical 电气	25 times/min 25次/分
Operating speed 动作速度		0.1mm-1m/s
Protection degree 保护等级		IP40

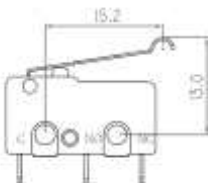
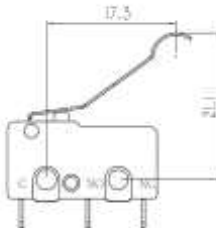
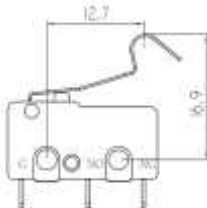
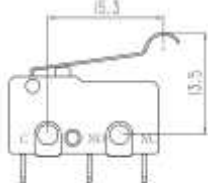
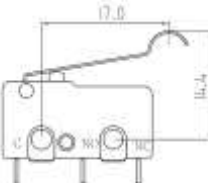
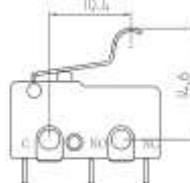
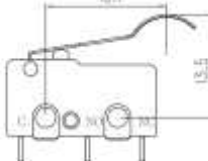
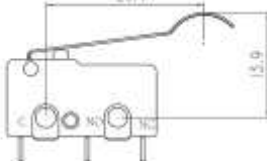
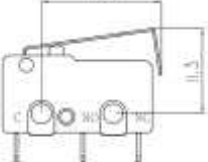
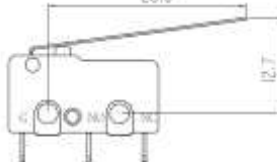
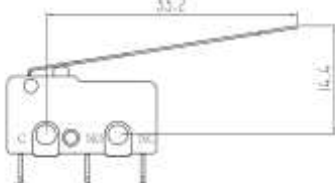
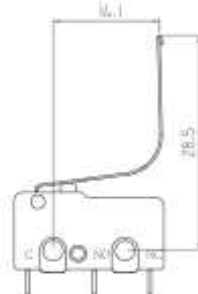
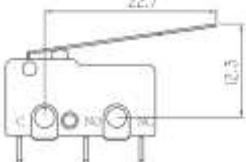
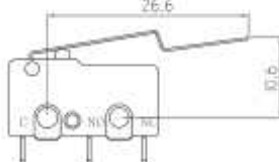
KW12 series micro switch

Product Ordering 产品选型

KW12	1	2	3	4	5
KW12 series micro switch KW12 系列微动开关	Lever type 杠杆类型	Terminal type 接线端子类型	Contact form 接触方式	Rating 额定值	Operating force 动作力

Lever Type 杠杆类型

Code 代号	0	1	11	12
Dimensions 尺寸图				
Code 代号	13	14	15	16
Dimensions 尺寸图				
Code 代号	2	22	3	4
Dimensions 尺寸图				

Code 代号	5	52	53	54
Dimensions 尺寸图				
Code 代号	55	56	6	61
Dimensions 尺寸图				
Code 代号	7	8	9	
Dimensions 尺寸图				
Code 代号	91	92	93	
Dimensions 尺寸图				

KW12 series micro switch

Code 代号	D428	D628
Dimensions 尺寸图		

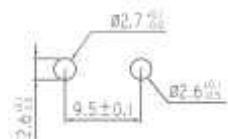
Terminal Type 接线端子类型

None 无表示	G	S
Solder terminal 焊接端子	#110 quick connect terminal #110快速连接端子	Straight PCB quick connect terminal 直PCB快插端子

Contact Form 接触方式

Code 代号	None 无表示	B	C
Contact form 接触方式	SPDT 双投型	SPDT-NC 常闭型	SPDT-NO 常开型
Circuit diagram 线路图形			

Mounting Holes Dimensions 安装孔尺寸



Rating 额定值

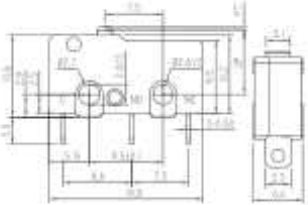
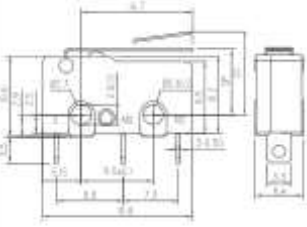
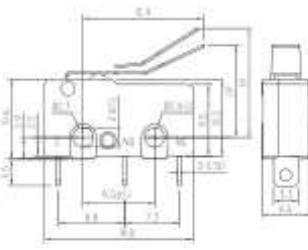
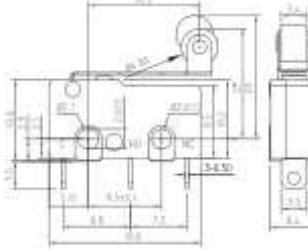
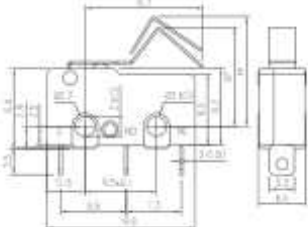
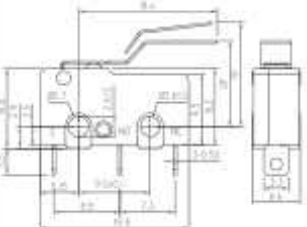
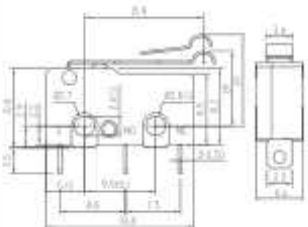
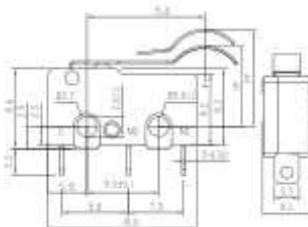
Code 代号	A	B	C	D
Rating 额定值	1A 125/250V AC	3A 125/250V AC	5A 125/250V AC	10A 125/250V AC

Operating Force 动作力

Code 代号	01	02	03	04	05
Operating force 动作力	80-100gf	100-150gf	130-170gf	200-300gf	280-380gf

The operating force above are measured from push button side, the operating force of the switch with lever will be calculated base on its operating force on the push button side. 动作力为不带杠杆从按钮位置测得。带杠杆动作力按照其相应的杠杆进行换算。

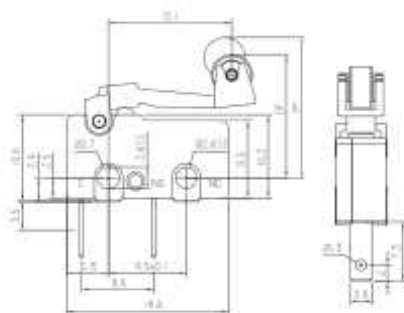
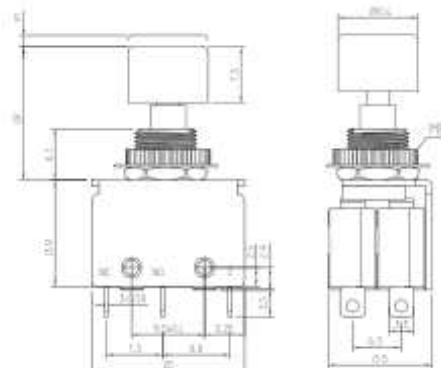
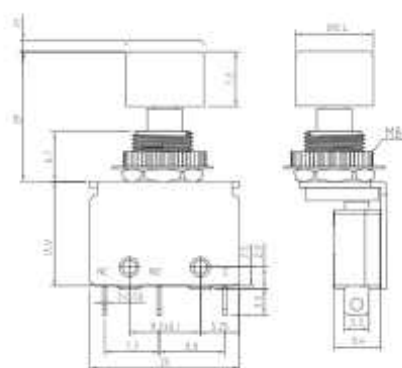
Other operating force not showed in this form can be customized by requirement. 其它动作力可以按实际需求定制。

KW12-0-□□	KW12-1-□□	KW12-12-□□	KW12-2-□□
 	 	 	 
KW12-3-□□	KW12-4-□□	KW12-5-□□	KW12-6-□□
 	 	 	 

KW12 series micro switch

KW12-7-KW12-8-KW12-9-KW12-D428-

KW12-D628-

KW12-22GC-

KW12F



Features 特点

- * 防尘、防水设计，适合潮湿条件（IP67）
- * 设计紧凑，体积较小，动作灵敏
- * 多种操作杠杆可供选择
- * 引线可按照要求定制
- * 广泛应用于家用电器，汽车电子，自动化等领域

- * Dust proof, water proof, suit for wet condition.(IP67)
- * Compact design, small size, high sensitivity .
- * Various levers are available for choice.
- * Lead wires can be customized by requirement.
- * Widely used in home appliance, auto electronic, automation area etc.

Characteristics 产品特性

Initial contact resistance 初始接触电阻	Without lead wire 不带导线	30m Ω max. 30m Ω 最大
	With lead wire 带导线	100m Ω max. lead wires type depends on the length of the wires 100m Ω 最大 带导线型取决于线的长度
Initial insulation resistance 初始绝缘电阻		100 M Ω (At 500V DC) 100 M Ω (在 500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Max. shock resistance 最大耐冲击	Endurance 耐久	1000m /s ² (approx.100G) max 1000m /s ² (约100G) 最大
	Malfunction 故障	300m /s ² (approx.30G)max 300m /s ² (约30G)最大
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	500,000 operations min. 500,000 次 最小
	Electrical life 电气寿命	10,000 operations min. 10,000 次 最小
Ambient temperature 环境温度		- 25℃ to +85℃
Ambient humidity 环境湿度		85%RH max.
Operating frequency 动作频率	Mechanical 机械	60 times/min 60 次/分
	Electrical 电气	25 times/min 25次/分
Operating speed 动作速度		0.1mm-1m/s
Protection degree 保护等级		IP67

KW12F series water proof micro switch

Product Ordering 产品选型

KW12F	1	2	3	4	5
KW12F series water proof micro switch KW12F 系列防水微动开关	Lever type 杠杆类型	Terminal type 接线端子类型	Contact form 接触方式	Rating 额定值	Operating force 动作力

Lever Type 杠杆类型

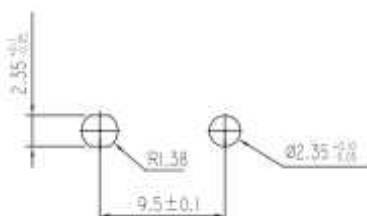
Code 代号	0	1	5	8
Drawing 简图				

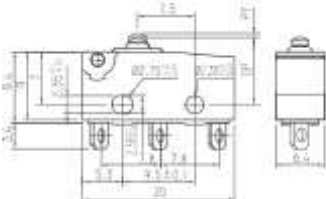
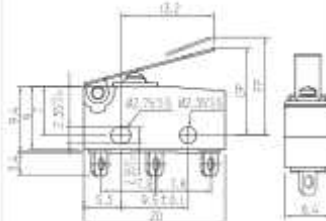
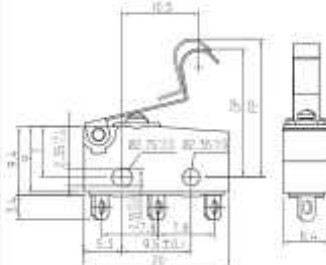
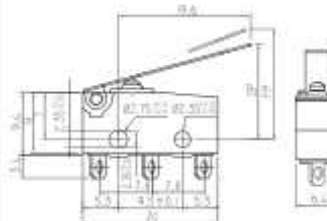
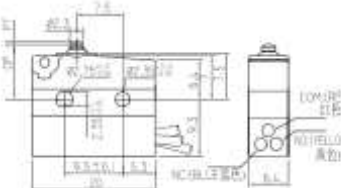
Other levers can be customized by requirement.
其它杠杆可按照要求定制。

Contact Form 接触方式

Code 代号	None 无表示	B	C
Contact form 接触方式	SPDT 双投型	SPDT-NC 常闭型	SPDT-NO 常开型
Circuit diagram 线路图形			

Mounting Holes Dimensions 安装孔尺寸



KW12F-0-□□	KW12F-1-□□	KW12F-5-□□	KW12F-8-□□
 	 	 	 
KW12F-0L1-□□	KW12F-0L1-□□	KW12F-5L1-□□	KW12F-8L1-□□
 	 	 	 

series micro switch
LZ15 系列 微动开关

LZ15



Features 特点

- * 多种驱动器满足各种场合控制需求
- * 高精度，动作灵敏
- * 高机械强度
- * 寿命长，稳定性好
- * 广泛应用于机械设备，生产线，电梯设备等领域
- * 已通过CCC,CE, UL 认证
- * Various actuator are available
- * High precision, fast action
- * High mechanical strength
- * Long life, stable and reliable
- * Widely applied in machinery, production line, elevator equipment etc.
- * CCC,CE,UL approvals

Characteristics 产品特性

Rating 额定值		15A 125/250VAC
Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻		100 MΩ min. (at 500V DC) 100 MΩ 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 带电流金属零件与各端子间	2,000Vrms, 50/60Hz for 1 min 2,000Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	2,000Vrms, 50/60Hz for 1 min 2,000Vrms, 50/60Hz 持续1分钟
Max. shock resistance 最大耐冲击	Destruction 破坏	1000m /s ²
	Malfunction 故障	300m /s ²
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	100,000 operations min. 100,000 次 最小
Ambient temperature 环境温度		-25℃ to +85℃
Ambient humidity 环境湿度		85%RH max.
Operating frequency 动作频率	Mechanical 机械	240 operations/min 240 次/分
	Electrical 电气	20 operations/min 20 次/分
Operating speed 动作速度		0.01mm-1m/s
Protection degree 保护等级		IP40

Product Ordering 产品选型

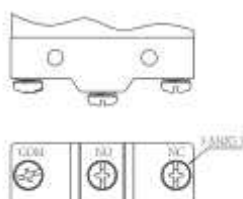
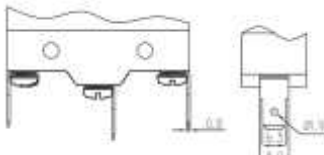
LZ15	1	2	3
LZ15 series micro switch LZ15系列微动开关	Shape type 外形种类	Actuator type 操作杆类型	Terminal type 接线端子种类
	G: (general type) (常用型)		B: M4 screw terminal M4 螺丝接线端子 B1: #250 quick connect terminal 快速连接端子

Actuators 操作杆

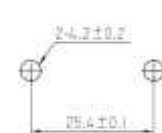
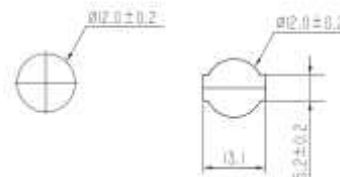
None / 无表示	S	D	O	O8	O22
Pin plunger 针形按钮型	Slim plunger 塞柱细按钮型	Short plunger 塞柱短按钮型	Panel mount plunger 面板安装式塞柱型	Panel mount long plunger 面板安装式长塞柱型	Panel mount roller plunger 面板安装式滚轮塞柱型
					
Q21	L	L2	W21	W	W4
Panel mount cross roller plunger 面板安装式交叉滚轮塞柱型	Leaf spring lever 簧片杠杆型	Roller leaf spring lever 簧片滚轮杠杆型	Short hinge lever 短杠杆型	Hinge lever 杠杆型	Low force hinge lever 微动作杠杆型
					
W22	W22M	W2	W2M	W49	W52
Short hinge plastic roller lever 塑料滚轮短杠杆型	Short hinge mental roller lever 金属滚轮短杠杆型	hinge plastic roller lever 塑料滚轮杠杆型	Hinge mental roller lever 金属滚轮杠杆型	Short hinge cross roller lever 交叉滚轮短杠杆型	Low force wire hinge lever 轻型钢丝杠杆型
					
W54	W25	W24	W2277		
Hinge cross roller lever 交叉滚轮杠杆型	Hinge $\Phi 20$ large roller lever $\Phi 20$ 大滚轮杠杆型	Low force long hinge lever 轻型长杠杆型	One way short hinge roller lever 单方向动作滚轮杠杆型		
					

LZ15 series micro switch

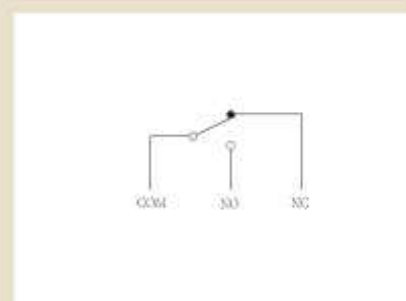
Terminal Type 接线端子类型

B	B1
M4 screw terminal M4 螺丝端子	#250 quick connect terminal 快速连接端子
	

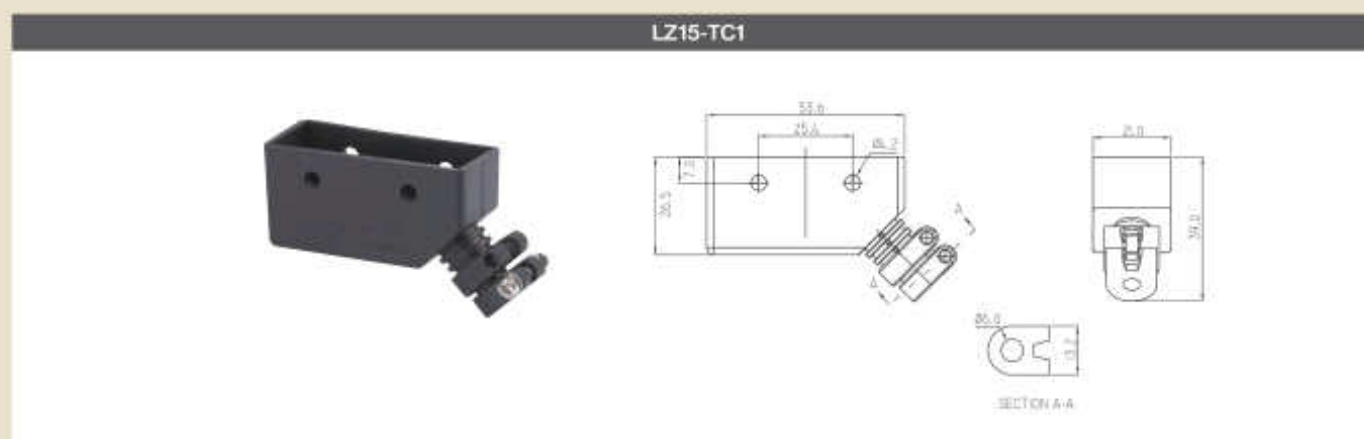
Mounting Holes Dimensions 安装孔尺寸

Mounting Holes 安装孔尺寸	Panel Mounting 面板安装尺寸
	

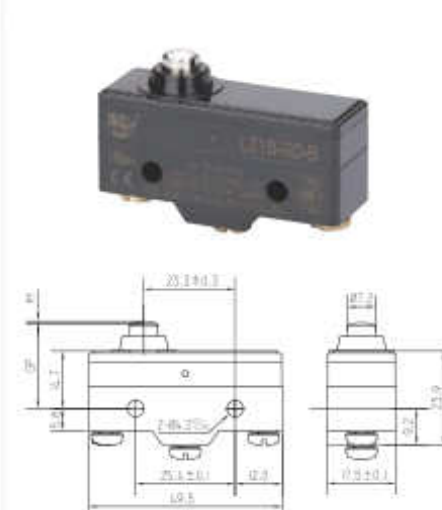
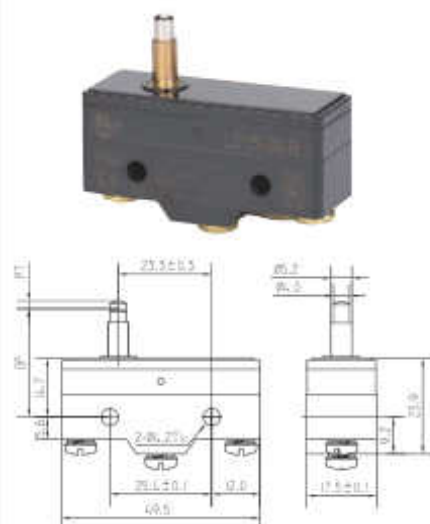
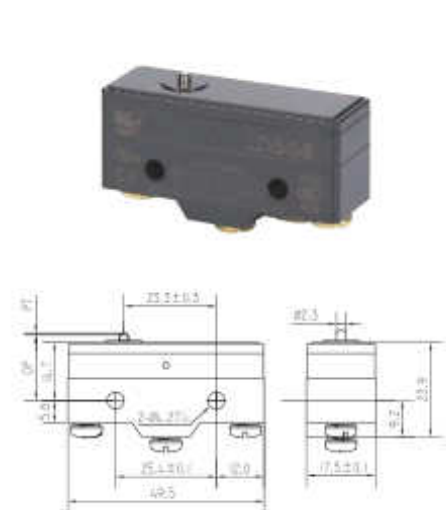
Contact Form 接触方式



Terminal Protecting Cover 接线端子防护套



LZ15-G-B	LZ15-GS-B	LZ15-GD-B
O.F. max. 350g (3.43N)	O.F. max. 350g (3.43N)	O.F. max. 350g (3.43N)
R.F. min. 114g (1.12N)	R.F. min. 114g (1.12N)	R.F. min. 114g (1.12N)
P.T. max. 0.4mm	P.T. max. 0.4mm	P.T. max. 0.4mm
O.T. min. 0.13mm	O.T. min. 1.6mm	O.T. min. 1.6mm
M.D. max. 0.05mm	M.D. max. 0.05mm	M.D. max. 0.05mm
O.P. 15.9±0.4mm	O.P. 28.2±0.5mm	O.P. 21.5±0.5mm

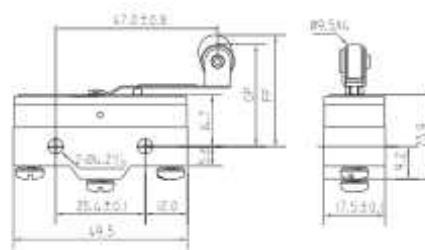
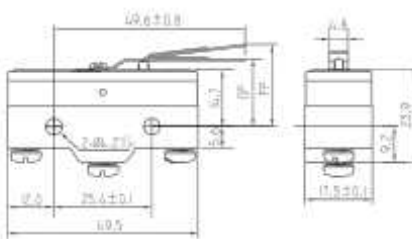
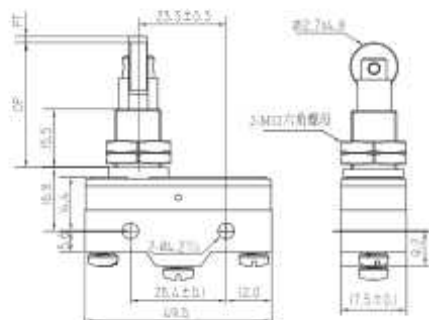


LZ15-GO-B	LZ15-GO8-B	LZ15-GO22-B
O.F. max. 350g (3.43N)	O.F. max. 350g (3.43N)	O.F. max. 350g (3.43N)
R.F. min. 114g (1.12N)	R.F. min. 114g (1.12N)	R.F. min. 114g (1.12N)
P.T. max. 0.4mm	P.T. max. 0.5mm	P.T. max. 0.4mm
O.T. min. 5.5mm	O.T. min. 5.5mm	O.T. min. 3.58mm
M.D. max. 0.05mm	M.D. max. 0.05mm	M.D. max. 0.05mm
O.P. 21.8±0.8mm	O.P. 32.5±1.0mm	O.P. 33.4±1.2mm

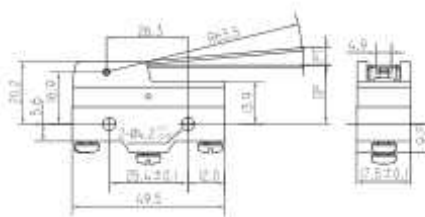
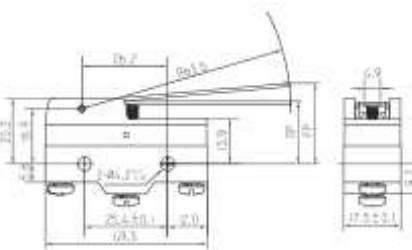
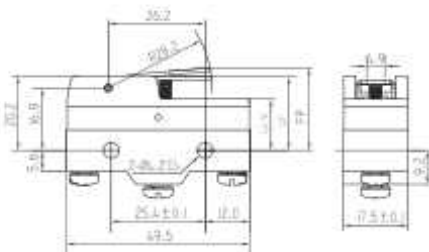


LZ15 series micro switch

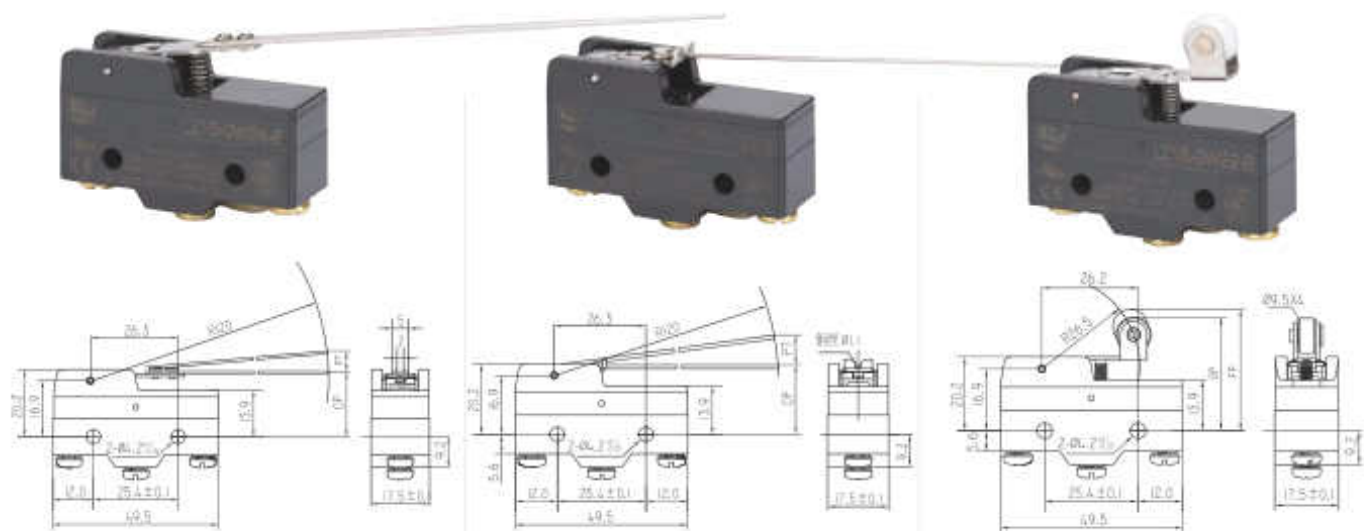
LZ15-GQ21-B	LZ15-GL-B	LZ15-GL2-B
O.F. max. 350g (3.43N)	O.F. max. 140g (1.38N)	O.F. max. 140g (1.38N)
R.F. min. 114g (1.12N)	R.F. min. 14g (0.14N)	R.F. min. 14g (0.14N)
P.T. max. 0.4mm	O.T. min. 1.6mm	O.T. min. 1.6mm
O.T. min. 3.58mm	M.D. max. 1.3mm	M.D. max. 1.3mm
M.D. max. 0.05mm	O.P. 17.4±0.8mm	O.P. 28.6±0.8mm
O.P. 33.4±1.2mm	F.P. max. 20.6mm	F.P. max. 31.8mm



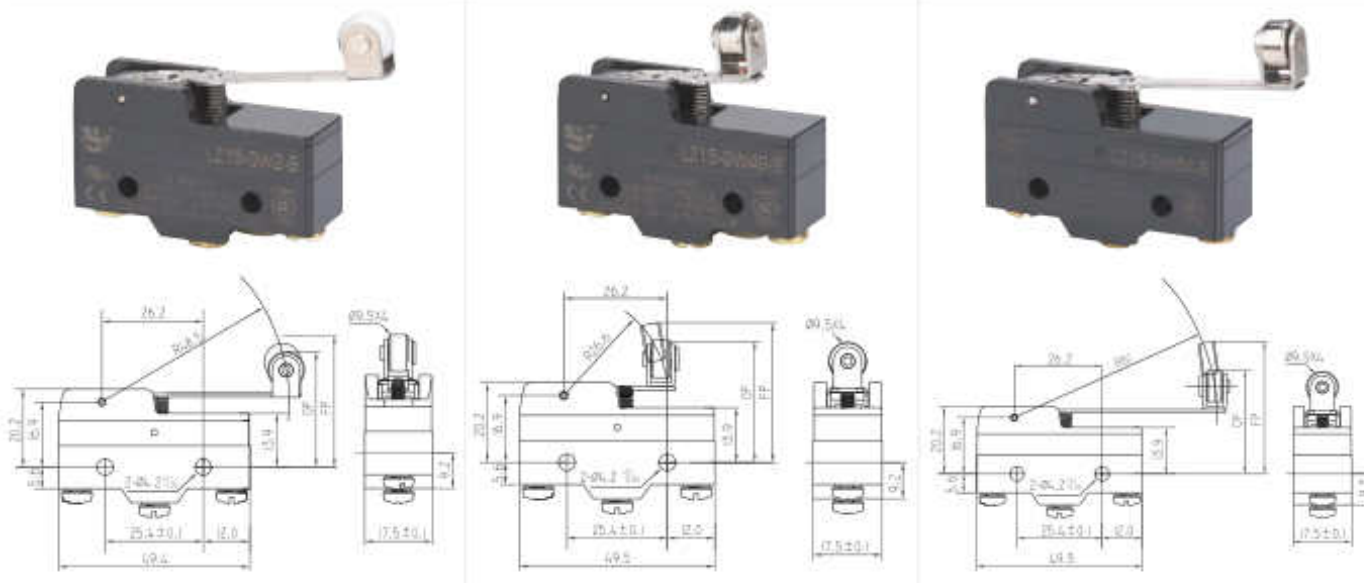
LZ15-GW21-B	LZ15-GW-B	LZ15-GW4-B
O.F. max. 160g (1.57N)	O.F. max. 70g (0.69N)	O.F. max. 28g
R.F. min. 28g (0.27N)	R.F. min. 14g (0.14N)	R.F. min. 3.5g
O.T. min. 2.0mm	O.T. min. 5.6mm	O.T. min. 5.6mm
M.D. max. 1.0mm	M.D. max. 1.27mm	M.D. max. 1.27mm
O.P. 19±0.8mm	O.P. 19±0.8mm	O.P. 19±0.8mm
F.P. max. 24.8mm	F.P. max. 28.2mm	F.P. max. 28.2mm



LZ15-GW24-B	LZ15-GW52-B	LZ15-GW22-B plastic roller 塑料轮 LZ15-GW22M-B mental roller 金属轮
O.F. max. 6g (0.06N)	O.F. max. 6g (0.06N)	O.F. max. 160g (1.57N)
R.F. min. 0.5g (0.005N)	R.F. min. 0.5g (0.005N)	R.F. min. 42g (0.41N)
O.T. min. 10.0mm	O.T. min. 5.6mm	O.T. min. 2.4mm
M.D. max. 2.0mm	M.D. max. 0.65mm	M.D. max. 0.5mm
O.P. 19.8 ± 1.6mm	O.P. 19 ± 1.0mm	O.P. 30.2 ± 0.4mm
F.P. max. 39.6mm	F.P. max. 27.3mm	F.P. max. 32.5mm

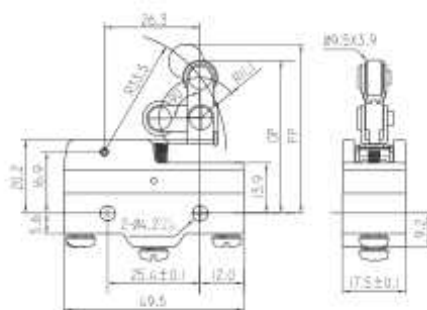
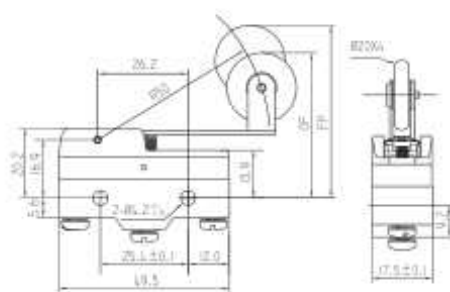


LZ15-GW2-B plastic roller 塑料轮 LZ15-GW2M-B mental roller 金属轮	LZ15-GW49-B	LZ15-GW54-B
O.F. max. 100g (0.98N)	O.F. max. 170g (1.67N)	O.F. max. 100g (0.98N)
R.F. min. 22g (0.22N)	R.F. min. 42g (0.41N)	R.F. min. 22g (0.22N)
O.T. min. 4.0mm	O.T. min. 2.4mm	O.T. min. 4.0mm
M.D. max. 1.2mm	M.D. max. 0.5mm	M.D. max. 1.0mm
O.P. 30.2 ± 0.8mm	O.P. 31 ± 0.4mm	O.P. 31 ± 0.8mm
F.P. max. 36.5mm	F.P. max. 33.3mm	F.P. max. 37.3mm



LZ15 series micro switch

	LZ15-GW25-B		LZ15-GW2277-B
O.F. max.	160g (1.57N)	O.F. max.	70g (0.69N)
R.F. min.	28g (0.27N)	R.F. min.	14g (0.14N)
O.T. min.	2.0mm	O.T. min.	5.6mm
M.D. max.	1.0mm	M.D. max.	1.27mm
O.P.	19±0.8mm	O.P.	19±0.8mm
F.P. max.	24.8mm	F.P. max.	28.2mm



series sealed limit switch LZ5 系列密封行程开关



LZ5



Features 特点

- * 防尘, 防油, 防水结构设计(IP65)
- * 多种操作柄满足不同场合控制需求
- * 机械寿命长, 机械强度高
- * 高精度, 动作灵敏
- * 广泛应用于生产设备, 机械, 自动化等领域
- * CCC, CE认证产品
- * Dust proof, oil proof, water proof design(IP65)
- * Various actuator are available
- * High mechanical life and mechanical strength
- * High precision, fast action
- * Widely applied in production equipment, machinery, automation etc,
- * CCC, CE approvals

Characteristics 产品特性

Rating 额定值		10A 125/250VAC 0.5A 125VDC
Initial contact resistance 初始接触电阻		25m Ω max. 25m Ω 最大
Initial insulation resistance 初始绝缘电阻		100 M Ω min. (at 500V DC) 100 M Ω 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	2,000Vrms, 50/60Hz for 1 min 2,000Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	2,000Vrms, 50/60Hz for 1 min 2,000Vrms, 50/60Hz 持续1分钟
Max. shock resistance 最大耐冲击	Destruction 破坏	1000m /s ²
	Malfunction 故障	300m /s ²
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	100,000 operations min. 100,000 次 最小
Ambient temperature 环境温度		-10℃ to +85℃
Ambient humidity 环境湿度		95% RH max.
Operating frequency 动作频率	Mechanical 机械	120 operations/min 120 次/分
	Electrical 电气	30 operations/min 30 次/分
Operating speed 动作速度		0.01mm-50cm/s
Protection degree 保护等级		IP65

LZ5 series sealed limit switch

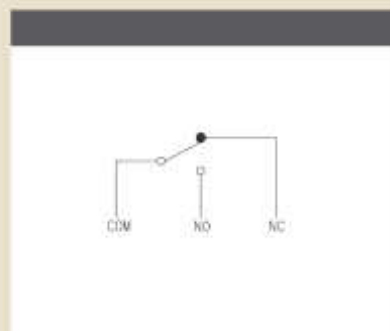
Product Ordering 产品选型

LZ5	-	1
LZ5 series sealed limit switch LZ5 系列密封行程开关		Actuator type 操作柄类型

Actuators 操作杆

330 Panel mount push plunger 面板安装塞柱型	342 Panel mount roller plunger 面板安装滚轮塞柱型	341 Panel mount across roller plunger 面板安装交叉滚轮塞柱型	110 Short hinge lever 短杠杆型
111 Hinge lever 杠杆型	120 Short roller lever 短滚轮杠杆型	121 Roller lever 滚轮杠杆型	127 One-way roller lever 单向动作滚轮杠杆型

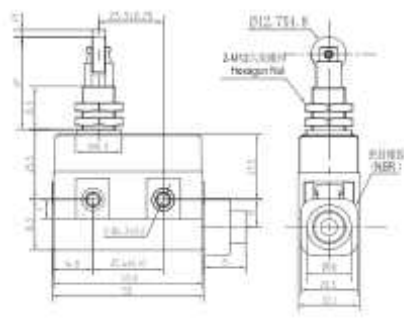
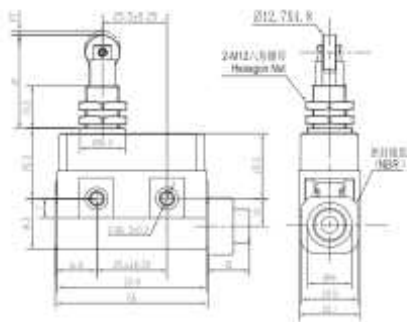
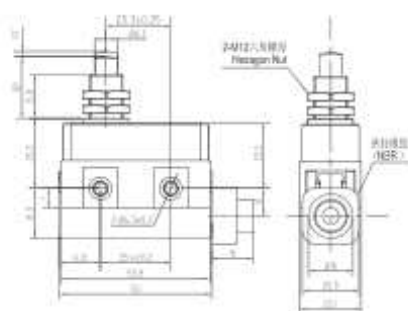
Contact Form 接触方式



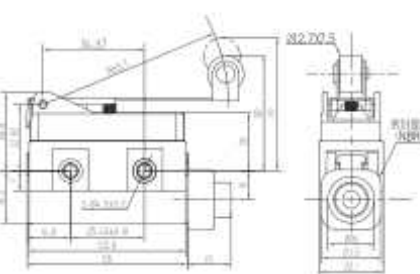
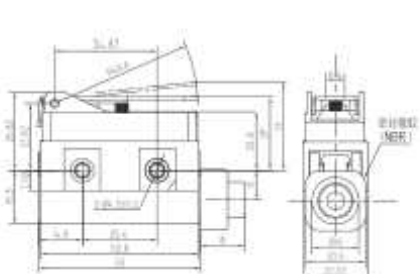
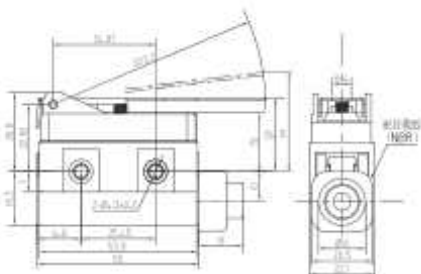
Mounting Holes Dimensions 安装孔尺寸

mounting holes 安装孔尺寸	panel mounting 面板安装尺寸
Diagram showing the mounting holes with dimensions: $2-\varnothing 4.3 \pm 0.2$ and 25.4 ± 0.1.	Diagram showing the panel mounting dimensions: $\varnothing 12.0 \pm 0.20$, 13.1, and 5.20.

LZ5330		LZ5342		LZ5341	
O.F. max.	600g (5.88N)	O.F. max.	600g (5.88N)	O.F. max.	600g (5.88N)
R.F. min.	100g (0.98N)	R.F. min.	100g (0.98N)	R.F. min.	100g (0.98N)
P.T. max.	1.6mm	P.T. max.	1.6mm	P.T. max.	1.6mm
O.T. min.	5mm	O.T. min.	5mm	O.T. min.	5mm
M.D. max.	0.2mm	M.D. max.	0.2mm	M.D. max.	0.2mm
O.P.	21.8 ± 1.2 mm	O.P.	33.4 ± 1.2 mm	O.P.	33.4 ± 1.2 mm



LZ5111		LZ5110		LZ5121	
O.F. max.	170g (1.67N)	O.F. max.	260g (2.55N)	O.F. max.	200g (1.96N)
R.F. min.	26g (0.25N)	R.F. min.	35g (0.34N)	R.F. min.	40g (0.39N)
O.T. min.	4mm	O.T. min.	2.5mm	O.T. min.	5mm
M.D. max.	3mm	M.D. max.	1.7mm	M.D. max.	3mm
O.P.	25 ± 1 mm	O.P.	25 ± 1mm	O.P.	40 ± 1 mm
F.P. max.	35mm	F.P. max.	33mm	F.P. max.	51mm



series sealed limit switch LZ7 系列 密封行程开关



LZ7



Features 特点

- * 多种驱动方式满足各种场合的控制需求
- * 高机械寿命和机械强度
- * 防尘、防油、防水设计 (IP65)
- * 广泛应用于生产设备、机械、自动化等领域
- * 已通过CCC,CE认证
- * Various actuators are available
- * High mechanical life and mechanical strength
- * Dust proof, oil proof and water proof design (IP65)
- * Widely applied in production equipment, machinery, automation etc.
- * CCC,CE approvals

Characteristics 产品特性

Rating 额定值		10A 125/250VAC 0.3A 220VDC
Initial contact resistance 初始接触电阻		25m Ω max. 25m Ω 最大
Initial insulation resistance 初始绝缘电阻		100 M Ω min. (at 500V DC) 100 M Ω 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Max. shock resistance 最大耐冲击	Destruction 破坏	1000m/s ² max. 1000m/s ² 最大
	Malfunction 故障	300m/s ² max. 300m/s ² 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	100,000 operations min. 100,000 次 最小
Ambient temperature 环境温度		-10°C to +85°C
Ambient humidity 环境湿度		95% RH max.
Operating frequency 动作频率	Mechanical 机械	120 operations/min 120 次/分
	Electrical 电气	30 operations/min 30 次/分
Operating speed 动作速度		0.01mm-50cm/s
Protection degree 保护等级		IP65

LZ7 series sealed limit switch

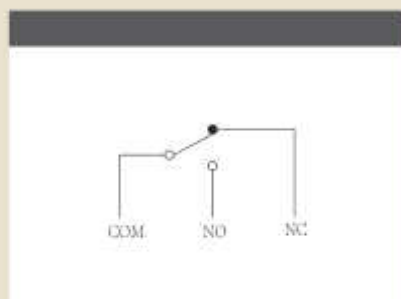
Product Ordering 产品选型

LZ7	1
LZ7 series sealed limit switch LZ7 系列密封行程开关	Actuator type 操作杆类型

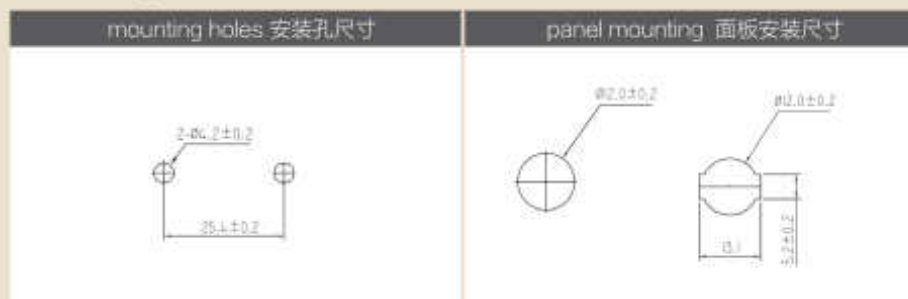
Actuators 操作杆

120	140	121	141	124	144
Hinge lever 杠杆型	Short hinge lever 短杠杆型	Roller lever 滚轮杠杆型	Short roller lever 短滚轮杠杆型	One-way roller lever 单向滚轮杠杆型	Short one-way roller lever 短单向滚轮杠杆型
100	110	310	311	312	166
Short push plunger 短按钮型	Push plunger 按钮型	Panel mount push plunger 面板安装式塞柱型	Panel mount roller plunger 面板安装式滚轮塞柱型	Panel mount cross roller plunger 面板安装式交叉滚轮塞柱型	Coil spring rod 柔性柄型

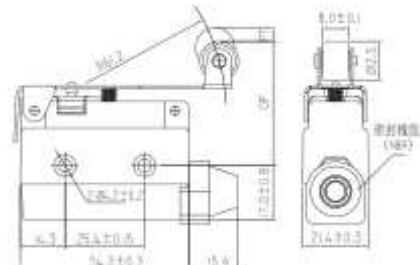
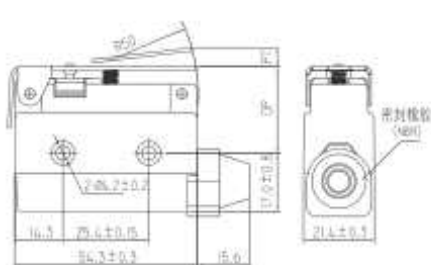
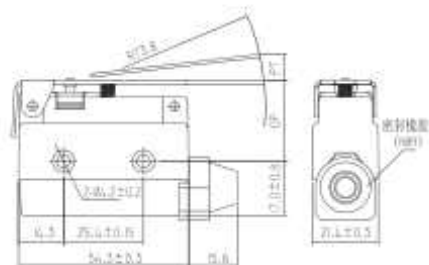
Contact Form 接触方式



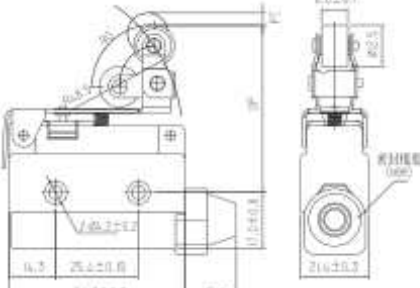
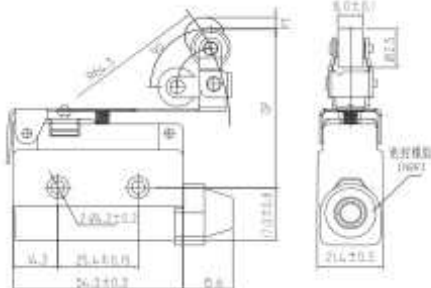
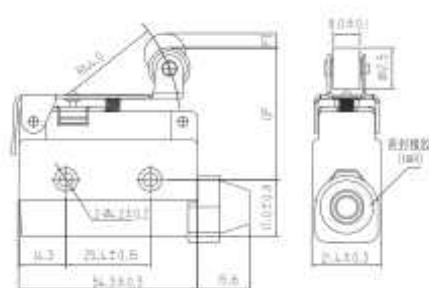
Mounting Holes Dimensions 安装孔尺寸



LZ7120	LZ7140	LZ7121
O.F. max. 150(1.47N)	O.F. max. 220g(2.16N)	O.F. max. 180g(1.76N)
R.F. min. 40g(0.39N)	R.F. min. 60g(0.59N)	R.F. min. 50g(0.49N)
P.T. max. 13.5mm	P.T. max. 8.5mm	P.T. max. 11.0mm
O.T. min. 4.0mm	O.T. min. 2.5mm	O.T. min. 3.0mm
M.D. max. 3.2mm	M.D. max. 2.0mm	M.D. max. 2.4mm
O.P. 25±1.0 mm	O.P. 25±1 mm	O.P. 40±1 mm
F.P. max. 35mm	F.P. max. 32mm	

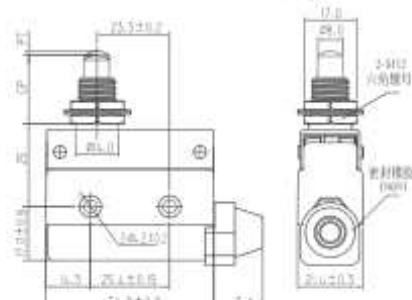
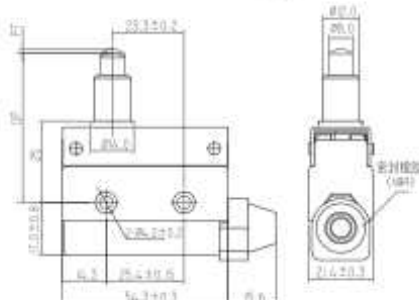
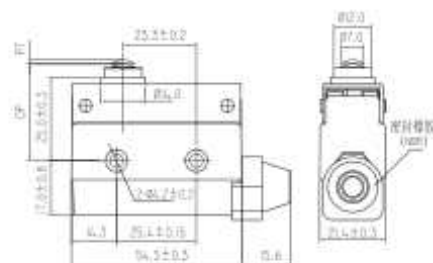


LZ7141	LZ7124	LZ7144
O.F. max. 240g(2.35N)	O.F. max. 200g(1.96N)	O.F. max. 280g(2.74N)
R.F. min. 80g(0.78N)	R.F. min. 60g(0.59N)	R.F. min. 100g(0.98N)
P.T. max. 6.5mm	P.T. max. 11mm	P.T. max. 6.5mm
O.T. min. 2.0mm	O.T. min. 3.0mm	O.T. min. 2.0mm
M.D. max. 1.5mm	M.D. max. 2.4mm	M.D. max. 1.5mm
O.P. 40±1 mm		O.P. 50±1.2 mm

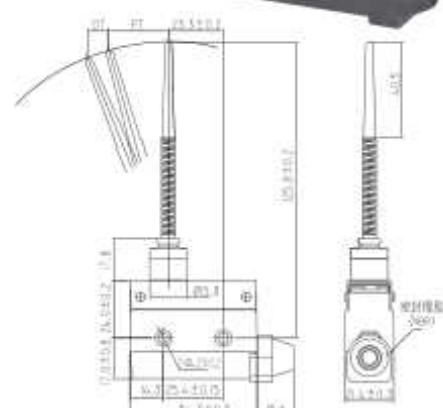
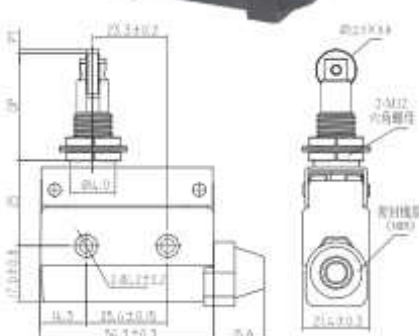
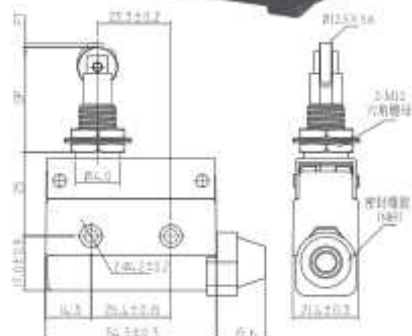


LZ7 series sealed limit switch

LZ7100		LZ7110		LZ7310	
O.F. max.	600g(5.88N)	O.F. max.	600g(5.88N)	O.F. max.	600g(5.88N)
R.F. min.	100g(0.98N)	R.F. min.	100g(0.98N)	R.F. min.	100g(0.98N)
P.T. max.	2.0mm	P.T. max.	2.0mm	P.T. max.	2.0mm
O.T. min.	0.8mm	O.T. min.	5.0mm	O.T. min.	6.0mm
M.D. max.	0.8mm	M.D. max.	0.8mm	M.D. max.	0.8mm
O.P.	30.5 ± 0.8 mm	O.P.	48 ± 1.2 mm	O.P.	22 ± 1.2mm



LZ7311		LZ7312		LZ7166	
O.F. max.	600g(5.88N)	O.F. max.	600g(5.88N)	O.F. max.	120g(1.18N)
R.F. min.	100g(0.98N)	R.F. min.	100g(0.98N)	P.T. max.	250mm
P.T. max.	2.0mm	P.T. max.	2.0mm	O.T. min.	11mm
O.T. min.	6.0mm	O.T. min.	6.0mm		
M.D. max.	0.8mm	M.D. max.	0.8mm		
O.P.	33.3±1.2mm	O.P.	33.3±1.2mm		



series mini limit switch
LZ8 系列 小型行程开关



LZ8



Features 特点

- * 体积小, 寿命长
- * 开放端子接线方便
- * 防尘、防水、防油设计(IP65)
- * 双回路开关设计
- * 结构强度高, 由锌合金本体和塑料盖组成
- * 广泛应用于输送机械, 机床设备, 自动化等领域
- * 已通过CE,CCC认证
- * Compact design, long operating life
- * Easy wiring with open terminals
- * Dust proof, water proof, oil proof structure(IP65)
- * Double circuit line design
- * High mechanical strength with aluminum alloy body and plastic cover
- * Widely applied in transfer handling machinery, machine tool equipment, automation etc.
- * CE,CCC approvals

Characteristics 产品特性

Rating 额定值		5A 250VAC 0.3A 220VDC
Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻(在500V DC)		100 MΩ min. (at 500V DC) 100 MΩ 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, 50/60Hz for 1 min 1,000Vrms, 50/60Hz 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Shock resistance 耐冲击	Mechanical durable 机械耐久	1000m /s ² max. 1000m /s ² 最大
	Malfunction 误动作	300m /s ² max. 300m /s ² 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	200,000 operations min. 200,000 次 最小
Ambient temperature 环境温度		-25℃ to +85℃
Ambient humidity 环境湿度		95% RH max.
Operating frequency 动作频率	Mechanical 机械	120 times/min 120 次/分
	Electrical 电气	30 times/min 30 次/分
Operating speed 动作速度		5mm-0.5m/s
Protection degree 保护等级		IP65

LZ8 series mini limit switch

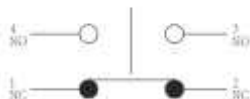
Product Ordering 产品选型

LZ8	1
LZ8 series mini limit switch LZ8 系列小型行程开关	Actuator type 操作杆类型

Actuators 操作杆

104	104M	108	108M	107	111
Plastic roller lever 塑料滚轮摇臂型	Metal roller lever 金属滚轮摇臂型	Adjustable plastic roller lever 可调节式塑料滚轮摇臂型	Adjustable metal roller lever 可调节式金属滚轮摇臂型	Adjustable rod lever 可调节式摇棒型	Push plunger 按钮型
112	122	166	167	168	169
Roller plunger 滚轮按钮	Cross roller plunger 垂直滚轮按钮	Coil spring-plastic rod 线圈弹簧-塑料棒	Coil spring rod 可弯曲线圈弹簧棒	Coil spring-steel rod 线圈弹簧-钢棒	Coil spring wire 弹簧钢丝线

Contact Form 接触方式

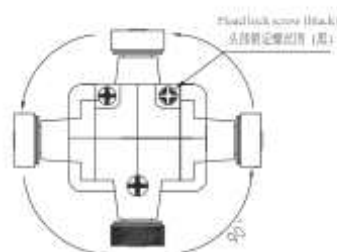


Mounting Holes 安装孔尺寸



Ajusting the Head of Switch 开关头方向调整

For type LZ8104, LZ8108, the direction of the head can be adjusted. Loosen the black screw at the top, rotate the head for 90°, then tighten black screw. LZ8104, LZ8107, LZ8108 头部方向可以调整, 松开顶部黑色螺丝, 将开关头部方向旋转90°, 再拧紧螺丝。



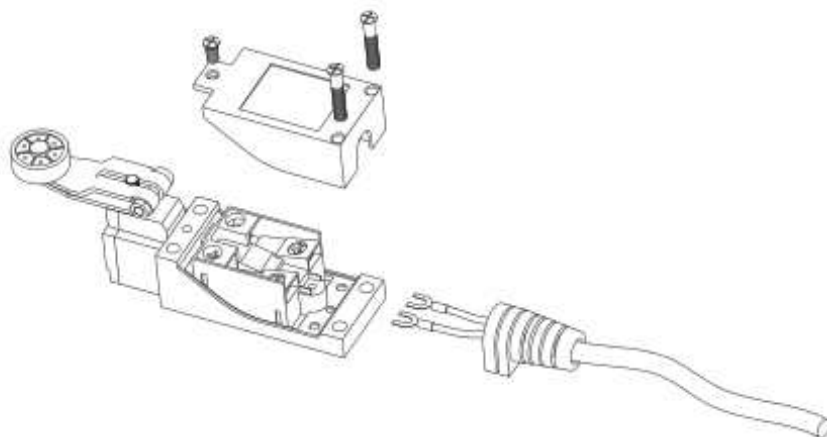
Wiring Instruction 安装说明

接线步骤

1. 松开盖子螺丝取下盖子
2. 将导线穿过盖子上的橡胶连接器
3. 松开接线端子螺丝，将导线上接插件插入接线端子并拧紧接线端子螺丝。
4. 将橡胶连接器插入盖子固定槽位，然后将盖子装上，安装盖子时确保侧边密封圈安装到位。
5. 拧紧盖子螺丝。

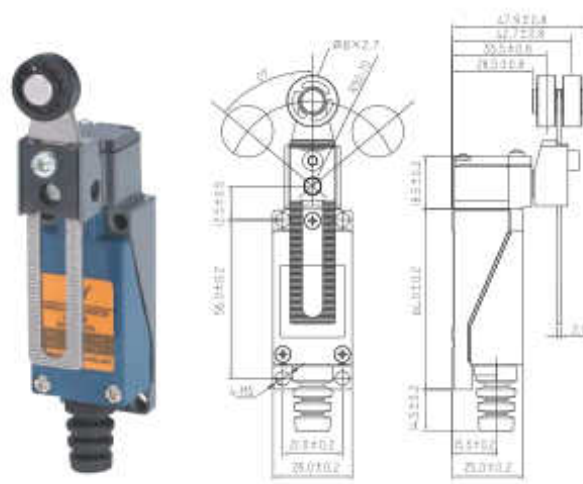
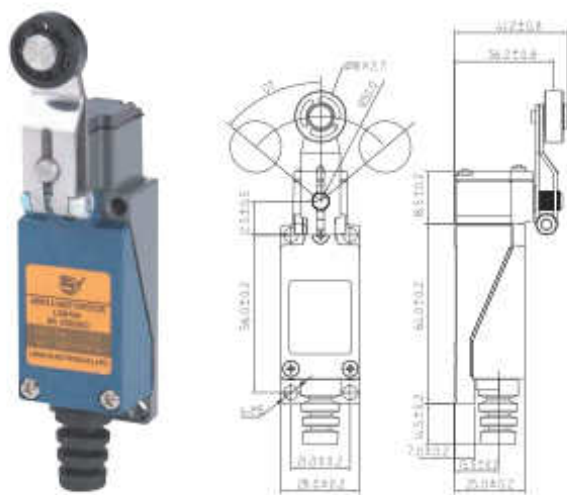
Wiring Steps:

1. Loosen the cover screws and remove the cover.
2. Crossing the lead wire through rubber connector on the cover.
3. Loosen the switch terminal screws and insert terminals on lead wire side into the right switch terminals and fasten the terminal screws.
4. Installing the rubber connector into the cover and then install the cover. Make sure the rubber sealing strip around the cover on the right position.
5. Fasten the cover screws.



LZ8104	
Q.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
Q.T. min.	50°
M.D. max.	10°

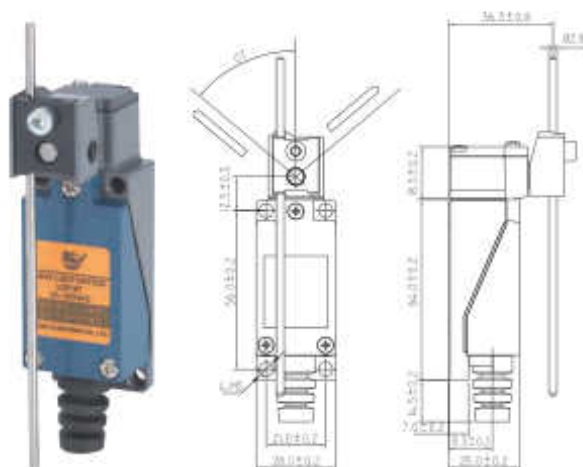
LZ8108	
Q.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
Q.T. min.	50°
M.D. max.	10°



LZ8 series mini limit switch

LZ8107

O.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
O.T. min.	50°
M.D. max.	10°



LZ8111

O.F. max.	900g(8.82N)
R.F. min.	150g(1.47N)
P.T. max.	1.5mm
O.T. min.	4.0mm
M.D. max.	1.0mm
O.P.	26 ± 0.8mm



LZ8112

O.F. max.	900g(8.82N)
R.F. min.	150g(1.47N)
P.T. max.	1.5mm
O.T. min.	4.0mm
M.D. max.	1.0mm
O.P.	37 ± 0.8mm



LZ8122

O.F. max.	900g(8.82N)
R.F. min.	150g(1.47N)
P.T. max.	1.5mm
O.T. min.	4.0mm
M.D. max.	1.0mm
O.P.	37 ± 0.8mm

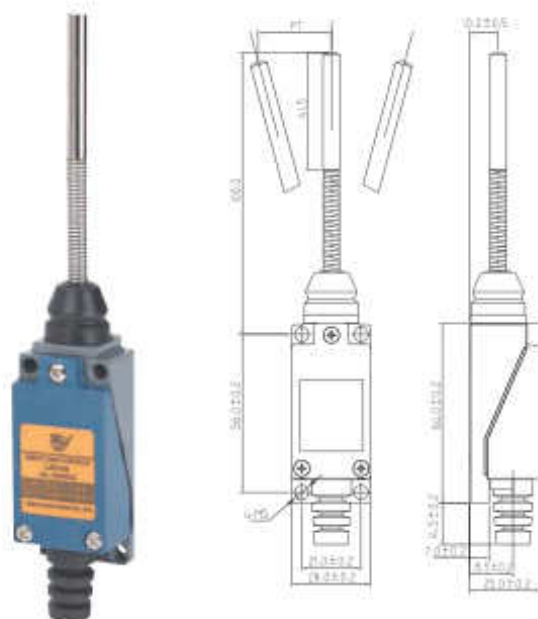


LZ8167

O.F. max.	150g(1.47N)
P.T. max.	30mm


LZ8168

O.F. max.	150g
P.T. max.	30mm


LZ8166

O.F. max.	150g(1.47N)
P.T. max.	30mm


LZ8169

O.F. max.	150g
P.T. max.	30mm



series compact limit switch

LHL 系列 紧凑型行程开关

LHL



Features 特点

- * 紧凑型设计，适用于狭小空间使用
- * 防尘、防水和防油结构（IP65）
- * 外形坚固，机械寿命长
- * 广泛应用于机床设备，传输设备，自动化等领域
- * Compact design, suit for small space
- * Dust proof, water proof and oil proof structure(IP65)
- * Strong body, long mechanical life
- * Widely applied in transfer handling machinery, machine tool equipment, automation etc.

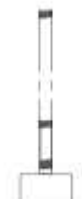
Characteristics 产品特性

Rating 额定值		10A 125/250VAC
Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻		100 MΩ min. (at 500V DC) 100 MΩ 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000Vrms, for 1 min 1,000Vrms, 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	1,500Vrms, for 1 min 1,500Vrms, 持续1分钟
	Between ground and each terminal 接线端子与接地之间	1,500Vrms, 50/60Hz for 1 min 1,500Vrms, 50/60Hz 持续1分钟
Shock resistance 耐冲击	Mechanical durable 机械耐久	1000m/s ² {100G, S} max. 1000m/s ² {100G, S} 最大
	Malfunction 误动作	300m/s ² {30G, S} max. 300m/s ² {30G, S} 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 operations min. 1,000,000 次 最小
	Electrical life 电气寿命	200,000 operations min. 200,000 次 最小
Ambient temperature 环境温度		-20°C to +60°C
Ambient humidity 环境湿度		35% to 95%RH
Operating frequency 动作频率	Mechanical 机械	120 times/min. 120 次/分
	Electrical 电气	30 times/min. 30 次/分
Operating speed 动作速度		5mm-0.5m/s
Protection degree 保护等级		IP65

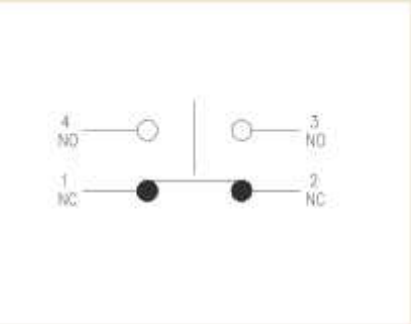
Product Ordering 产品选型

LHL	1
LHL compact limit switch LHL紧凑型行程开关	Actuator type 操作杆类型

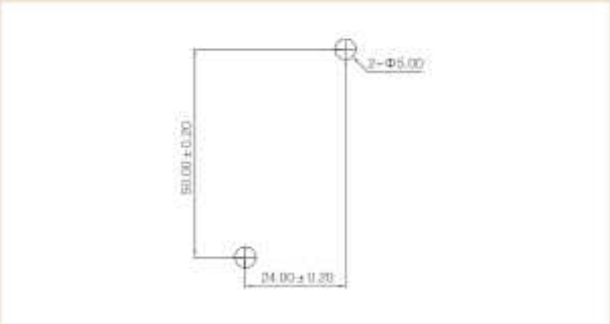
Actuators 操作杆

C21	C22	C23	C11	D11
Side roller lever 侧面 滚轮杠杆	Side adjustable roller lever 侧面 可调节滚轮杠杆	Side - adjustable large roller lever 侧面 可调节大滚轮杠杆	Side adjustable rod lever 侧面 可调节杆	Top sealed push plunger 顶部 密封塞柱
				
D22	D21	N11	N13	N14
Top sealed roller plunger 顶部 密封滚轮塞柱	Top sealed cross roller plunger 顶部 密封交叉滚轮塞柱	Coil spring rod 线圈弹簧棒	Coil spring-plastic rod 线圈弹簧-塑料棒	Coil spring wire 线圈钢丝
				

Contact Form 接触方式



Mounting Holes 安装孔尺寸



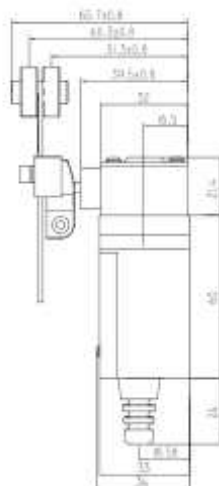
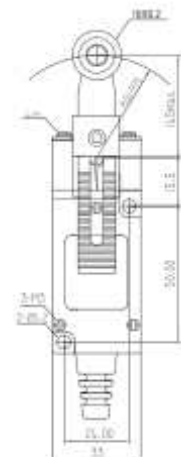
LHL series compact limit switch

LHL-C21



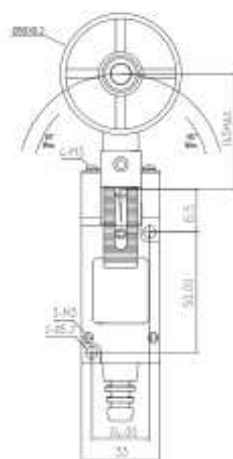
O.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
O.T. min.	75°
M.D. max.	10°

LHL-C22



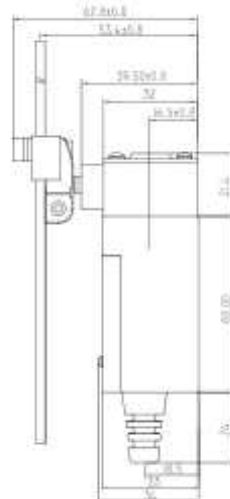
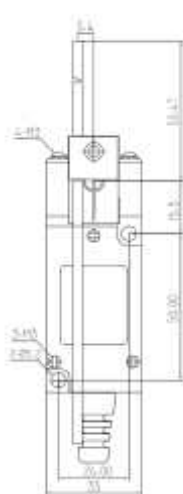
O.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
O.T. min.	75°
M.D. max.	10°

LHL-C23



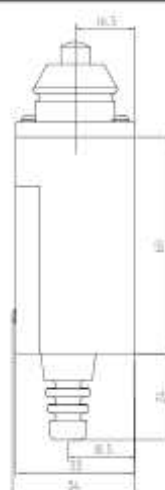
O.F. max.	550g(5.39N)
R.F. min.	100g(0.98N)
P.T. max.	20°
O.T. min.	75°
M.D. max.	14°

LHL-C11



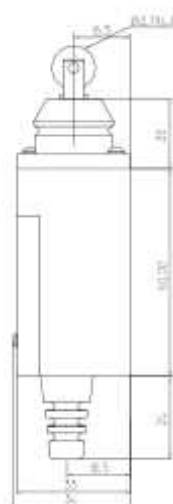
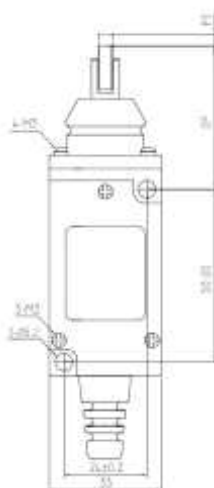
O.F. max.	750g(7.35N)
R.F. min.	100g(0.98N)
P.T. max.	20°
O.T. min.	75°
M.D. max.	10°

LHL-D11



O.F. max.	750g(7.35N)
R.F. min.	200g(1.96N)
P.T. max.	1.8mm
O.T. min.	4mm
M.D. max.	1.2mm

LHL-D22

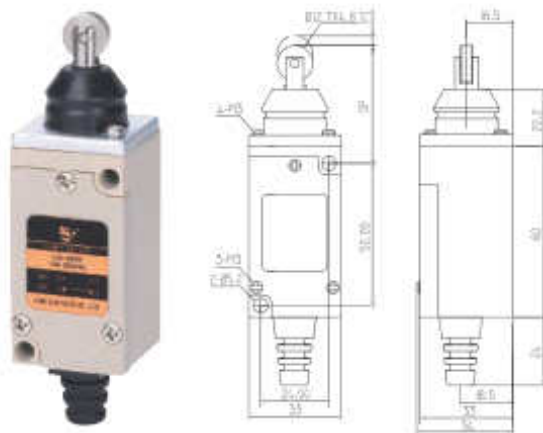


O.F. max.	900g(8.82N)
R.F. min.	200g(1.96N)
P.T. max.	1.8mm
O.T. min.	4mm
M.D. max.	1.2mm

LHL series compact limit switch

LHL-D21

O.F. max.	900g(8.82N)
R.F. min.	200g(1.96N)
P.T. max.	1.8mm
O.T. min.	4mm
M.D. max.	1.2mm



LHL-N13

O.F. max.	150g(1.47N)
R.F. min.	30g(0.29N)
P.T. max.	30mm
O.T. min.	20mm
M.D. max.	14°



LHL-N11

O.F. max.	150g(1.47N)
R.F. min.	30g(0.29N)
P.T. max.	30mm
O.T. min.	20mm
M.D. max.	14°



LHL-N14

O.F. max.	150g(1.47N)
R.F. min.	30g(0.29N)
P.T. max.	30mm
O.T. min.	20mm
M.D. max.	14°



series general limit switch

LWL 系列 通用行程开关

LWL



Features 特点

- * 双回路开关，用途广泛
- * 铝合金铸造外壳，机械强度高
- * 防尘、防水和防油结构设计
- * 多种操作柄可供选择
- * 广泛应用于机床设备、注塑机以及其它机器设备

- * Double circuit switch, widely used
- * Aluminate alloy case, high mechanical strength
- * Dust, water and oil proof structure design
- * Various actuators for different environment use
- * Widely applied in machine tool equipment, plastic injection machine and other machines

Characteristics 产品特性

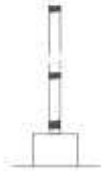
Rating 额定值		10A 125/250VAC
Initial contact resistance 初始接触电阻		25m Ω max. 25m Ω 最大
Initial insulation resistance 初始绝缘电阻		100 M Ω min. (at 500V DC) 100 M Ω 最小 (在500V DC)
Dielectric strength 电介强度	Between non-consecutive terminals 非连续端子间	1,000 Vrms, 1 min 1,000 Vrms, 1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	2,200 Vrms, 50/60Hz, 1 min 2,200 Vrms, 50/60Hz, 1 分钟
	Between ground and each terminal 接线端子与接地之间	2,200 Vrms, 50/60Hz, 1 min 2,200 Vrms, 50/60Hz, 1 分钟
Shock resistance 耐冲击	Mechanical durable 机械耐久	1000m/s ² {100G, S} max. 1000m/s ² {100G, S} 最大
	Malfunction 误动作	300m/s ² {30G, S} max. 300m/s ² {30G, S} 最大
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	1,000,000 Min. 1,000,000 最小
	Electrical life 电气寿命	100,000 Min. 100,000 最小
Ambient temperature 环境温度		-10°C to + 80°C
Ambient humidity 环境湿度		35% to 95%RH
Operating frequency 动作频率	Mechanical 机械	120 times/min. 120 次/分钟
	Electrical 电气	30 times/min. 30 次/分钟
Operating speed 动作速度		1mm-1m/s
Protection degree 保护等级		IP65

LWL series general limit switch

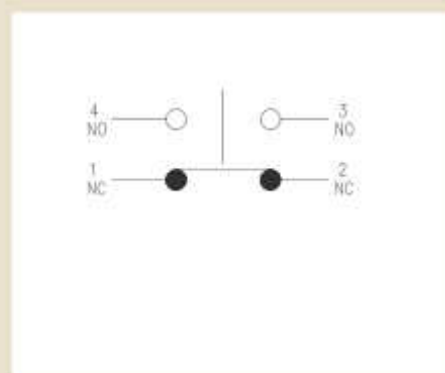
Product Ordering 产品选型

LWL	1
LWL series general limit switch LWL 通用行程开关	Actuator type 操作杆类型

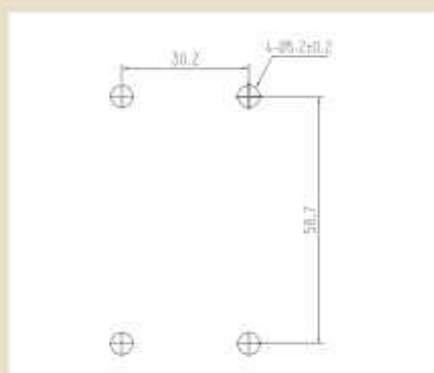
Actuators 操作杆

C21	C22	C23	C11	D11	D12
滚轮杠杆 Roller lever	可调节滚轮杠杆 adjustable roller lever	Fork lever lock 叉状锁定杠杆	Adjustable rod lever 可调节杆	Top push plunger 顶部塞柱	Top ball plunger 顶部球状塞柱
					
D22	D21	N11	N12	N13	N14
Top roller lever 顶部滚轮塞柱	Top across roller plunger 顶部交叉滚轮塞柱	Coil spring rod 线圈弹簧棒	Coil spring-steel rod 线圈弹簧-钢棒	Coil spring-plastic rod 线圈弹簧-塑料棒	Coil spring wire 线圈钢丝
					

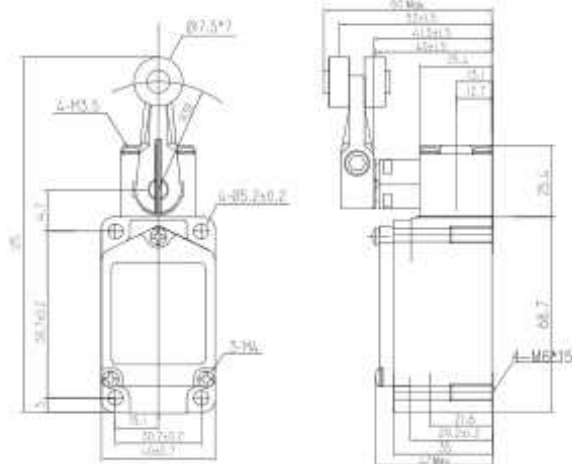
Contact Form 接触方式



Mounting Holes 安装孔尺寸

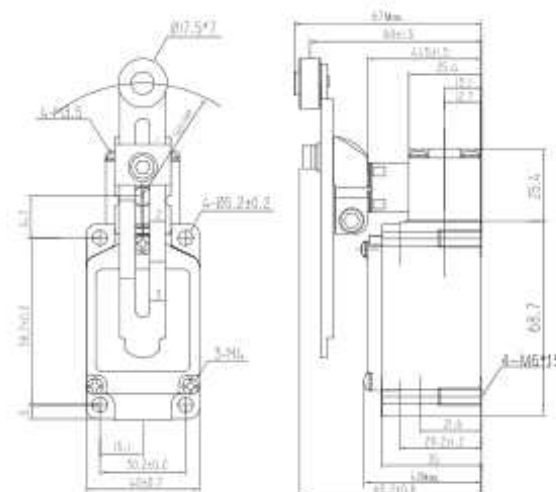


LWL-C21



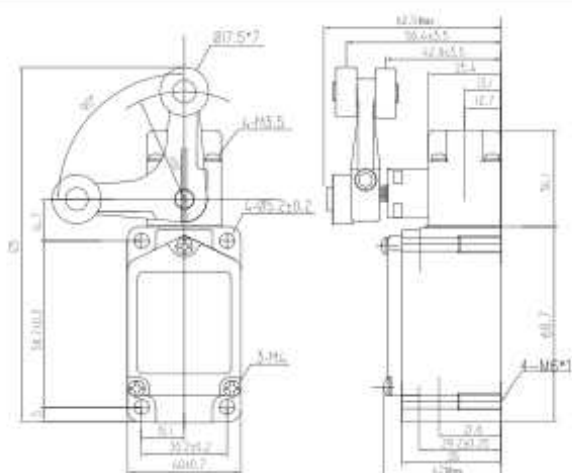
O.F. max.	1360g
R.F. min.	227g
P.T. max.	15° ± 5°
O.T. min.	30°
M.D. max.	12°

LWL-C22



O.F. max.	1360g
R.F. min.	227g
P.T. max.	15° ± 5°
O.T. min.	30°
M.D. max.	12°

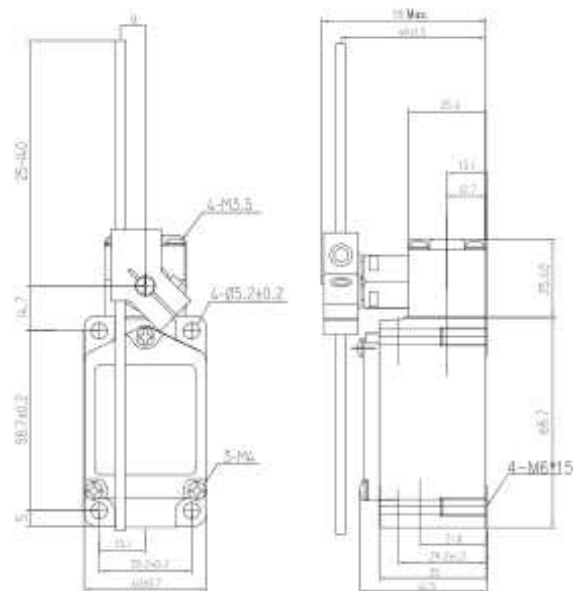
LWL-C23



O.F. max.	1200g
P.T. max.	55°
O.T. min.	35°

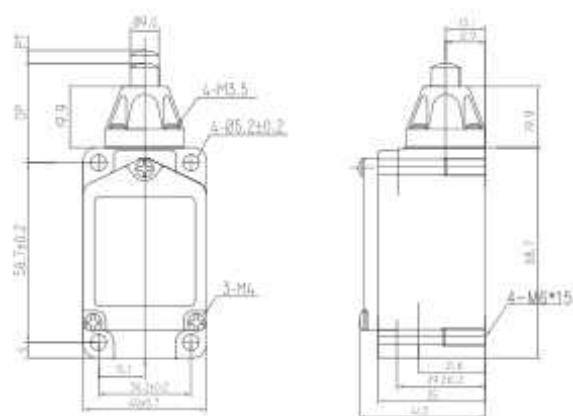
LWL series general limit switch

LWL-C11



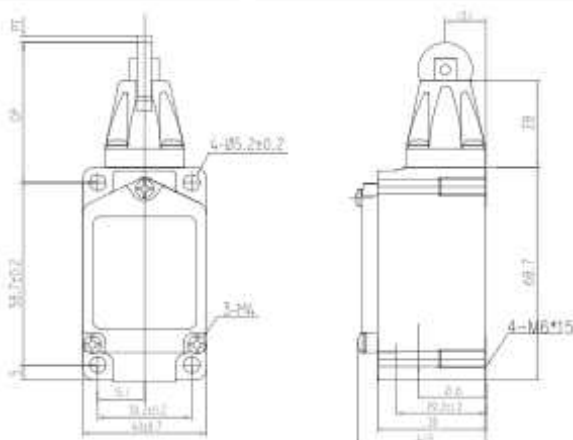
O.F. max.	142g
R.F. min.	28g
P.T. max.	15° ± 5°
O.T. min.	30°
M.D. max.	12°

LWL-D11



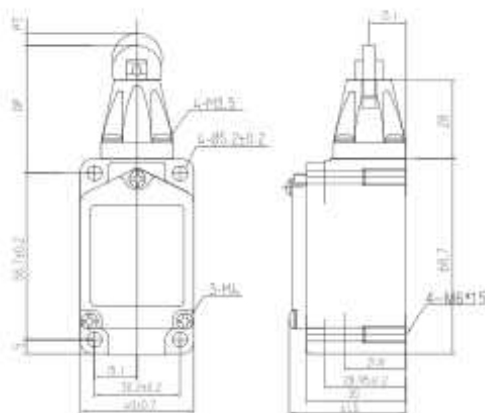
O.F. max.	2720g
R.F. min.	910g
P.T. max.	1.7mm
O.T. min.	6.4mm
M.D. max.	1mm

LWL-D21



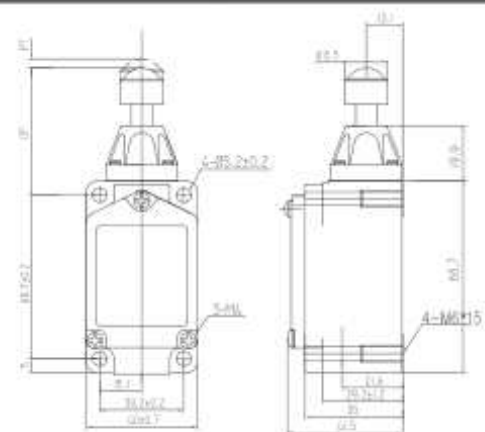
O.F. max.	2720g
R.F. min.	910g
P.T. max.	1.7mm
O.T. min.	6.4mm
M.D. max.	1mm

LWL-D22



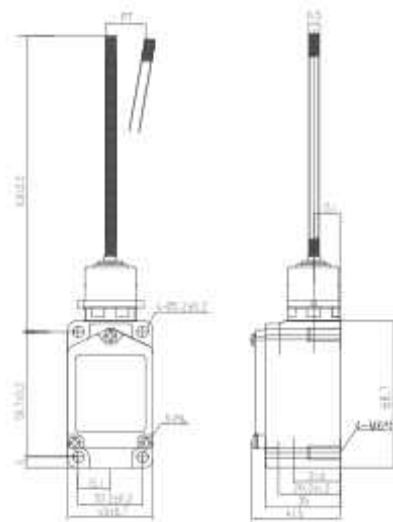
O.F. max.	2720g
R.F. min.	910g
P.T. max.	1.7mm
O.T. min.	6.4mm
M.D. max.	1mm

LWL-D12



O.F. max.	2720g
R.F. min.	910g
P.T. max.	1.7mm
O.T. min.	6.4mm
M.D. max.	1mm

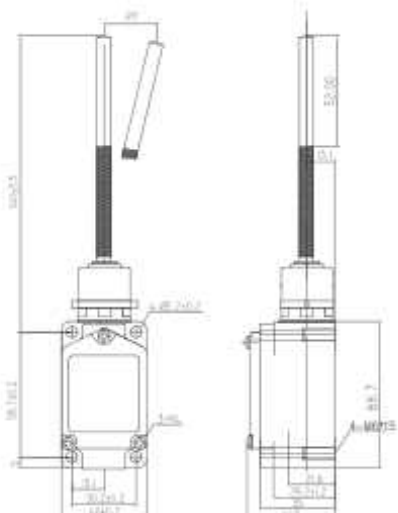
LWL-N11



O.F. max.	150g
P.T. max.	20 ± 10mm

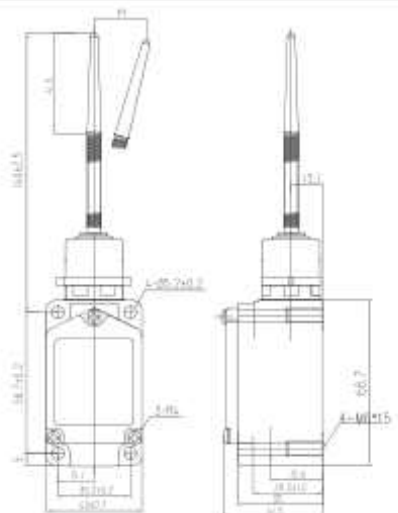
LWL series general limit switch

LWL-N12



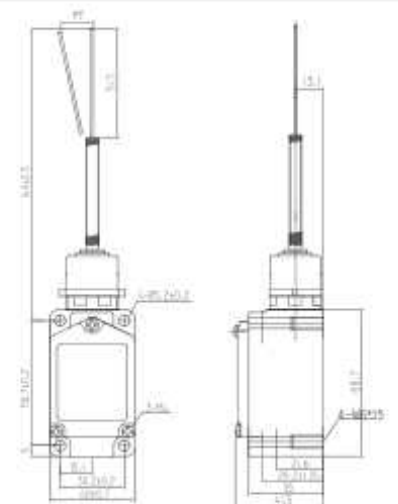
O.F. max. 150g
P.T. max. 20±10mm

LWL-N13



O.F. max. 150g
P.T. max. 20±10mm

LWL-N14



O.F. max. 150g
P.T. max. 20±10mm

series toggle switch

LT 系列 钮子开关



LT



Features 特点

- * 寿命高，可靠性好
- * 规格齐全可供选择
- * 广泛应用于电子设备，仪器仪表，自动化机器等领域
- * 已通过CE,CCC认证
- * Long life, high reliability
- * Full range with different contact forms are available
- * Widely applied in electrical equipment, Instrument and meter, automation machine
- * CE,CCC approvals

Characteristics 产品特性

Rating 额定值		15A 250VAC/20A 125VAC
Initial contact resistance 初始接触电阻		25mΩ max. 25mΩ 最大
Initial insulation resistance 初始绝缘电阻		100MΩ min (at 500VDC) 100MΩ以上 (在500VDC)
Dielectric strength 电介强度	Between non-consecutive terminals 在非连接端子间	1,000 Vrms, for 1 min 1,000 Vrms, 持续1分钟
	Between non-current carrying metal parts and each terminal 无负载金属零件与接线端子间	2,000 Vrms, 50/60Hz, 1 min 2,000 Vrms, 50/60Hz, 1 分钟
	Between ground and each terminal 接线端子与接地之间	2,000 Vrms, 50/60Hz, 1 min 2,000 Vrms, 50/60Hz, 1 分钟
Shock resistance 耐冲击	Durable 耐久	1000m/s ² (100G) max. 1000m/s ² (100G) 以下
	Malfunction 故障	300m/s ² (30G) max. 300m/s ² (30G) 以下
Vibration resistance 抗振性		10-55Hz, 1.5mm 双振幅 10-55Hz, 1.5mm double amplitude
Operating life 使用寿命	Mechanical life 机械寿命	100,000 cycles min. 100,000 次以上
	Electrical life 电气寿命	50,000 cycles min. 50,000 次以上
Ambient temperature 环境温度		-25℃ to +85℃
Ambient humidity 环境湿度		85%RH max.
Operating frequency 动作频率		30 times/min 30次/分

LT series toggle switch

Product Ordering 产品选型

LT	1	2	3	4
LT series toggle switch LT系列钮子开关	Outside Shape 开关外形	Numbers of pole 开关组数	Contact form 接触方式	Terminal type 接线端子
	1: Basic 基础款 2: improved 升级款 3: Waterproof 防水款	1: 1pole单组 2: 2poles 双组	10: ON—OFF 20: ON—ON 21: ON— (ON) 30: ON—OFF—ON 31: ON—OFF— (ON) 32: (ON) —OFF— (ON) 带 “ () ” 为自动复位 “ () ” means auto reset	A: Solder terminal 焊接端子 B: Screw terminal 螺丝端子 C: #250 quick connect terminal #250 快插端子

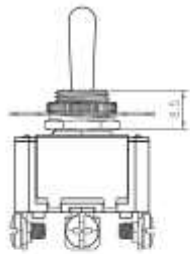
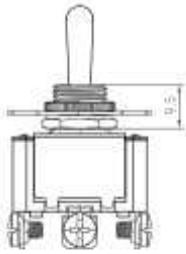
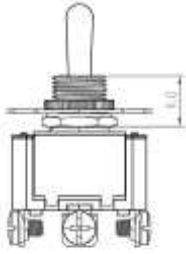
Contact Form 接触形式

Numbers of pole 开关组数	Code 代号	Contact form 接触方式			
1 pole 单组	10	ON — OFF			
	20	ON — ON			
	21	(ON) — ON			
	30	ON OFF ON			
	31	(ON) OFF ON			
	32	(ON) OFF (ON)			
2 poles 双组	10	ON — OFF			
	20	ON — ON			
	21	(ON) — ON			
	30	ON OFF ON			
	31	(ON) OFF ON			
	32	(ON) OFF (ON)			

Terminal Type 接线端子类型

A	B (LT1)	B (LT2,LT3)	C
Solder terminal 焊接端子	Screw terminal 螺丝端子	Screw terminal 螺丝端子	#250 quick connect terminal 快速连接端

Thread Height 安装螺柱高度

8.5mm	9.5mm	11mm
		

标准款尺寸: LT1为9.5mm, LT2为11mm, LT3为12mm
Standard height :LT1 is 9.5mm, LT2 is 11mm, LT3 is 12mm

Protection Cap
防护帽

The protection cap can be applied in any type of LT series toggle switch for preventing dust and splash liquid.
防护帽可以安装任何一款LT系列钮子开关。用于防尘, 防液体溅。



Mounting Holes
安装孔尺寸



LT1 系列 钮子开关



Features 特点

- * 基础款式，市场用量较大
- * 经济实惠，性价比高
- * 可选配防水帽
- * Basic type, high market demand
- * Affordable with high cost performance
- * Protection cap is available

Model Selection Form 选型表

Switch contact form 开关接触方式				Switch type 开关种类					
				1pole单极			2 poles双极		
LT1 Basic type 基础款				Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子	Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子
	ON	—	OFF	LT1110A	LT1110B	LT1110C	LT1210A	LT1210B	LT1210C
	ON	—	ON	LT1120A	LT1120B	LT1120C	LT1220A	LT1220B	LT1220C
	(ON)	—	ON	LT1121A	LT1121B	LT1121C	LT1221A	LT1221B	LT1221C
	ON	OFF	ON	LT1130A	LT1130B	LT1130C	LT1230A	LT1230B	LT1230C
	(ON)	OFF	ON	LT1131A	LT1131B	LT1131C	LT1231A	LT1231B	LT1231C
	(ON)	OFF	(ON)	LT1132A	LT1132B	LT1132C	LT1232A	LT1232B	LT1232C

Dimensions 外形尺寸

LT1 单组		LT1 双组	
LT1 1 Pole		LT1 2 Pole	

LT2 系列 钮子开关



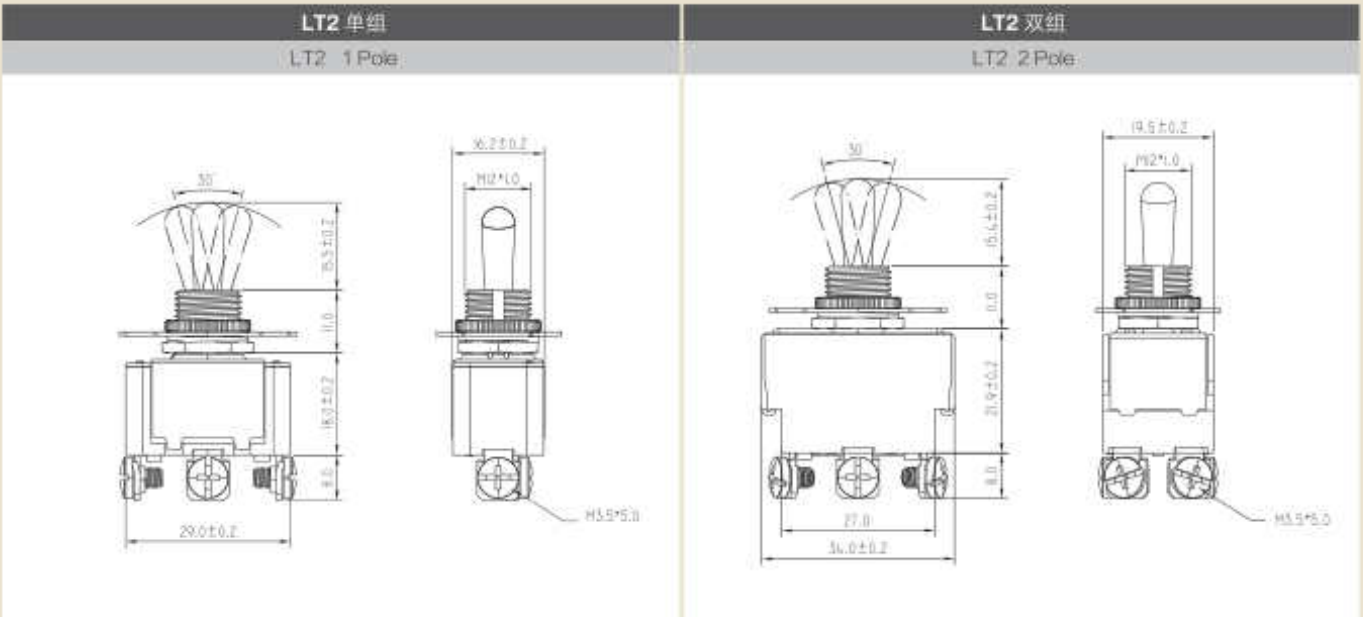
Features 特点

- * 升级款式，拥有更高的机械强度
 - * 三种接线端子可供选择
 - * 可选配防水帽
- * Improved type with high mechanical strength
 - * Three type of terminals are available
 - * Protection cap is available

Model Selection Form 选型表

Switch contact form 开关接触方式				Switch type 开关种类					
				1pole 单极			2 poles 双极		
LT2 Improved type 升级款				Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子	Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子
	ON	—	OFF	LT2110A	LT2110B	LT2110C	LT2210A	LT2210B	LT2210C
	ON	—	ON	LT2120A	LT2120B	LT2120C	LT2220A	LT2220B	LT2220C
	(ON)	—	ON	LT2121A	LT2121B	LT2121C	LT2221A	LT2221B	LT2221C
	ON	OFF	ON	LT2130A	LT2130B	LT2130C	LT2230A	LT2230B	LT2230C
	(ON)	OFF	ON	LT2131A	LT2131B	LT2131C	LT2231A	LT2231B	LT2231C
	(ON)	OFF	(ON)	LT2132A	LT2132B	LT2132C	LT2232A	LT2232B	LT2232C

Dimensions 外形尺寸



LT3 系列 钮子开关



Features 特点

- * 全新外形设计，外形更精致
- * 防护等级高，操作部分达IP67
- * 可选配面板防水螺母
- * New design with a delicate appearance
- * High protection degree, the operating section is comply with IP67
- * water proof panel nut are available

Panel waterproof nut 防水螺母



Model Selection Form 选型表

Switch contact form 开关接触方式				Switch type 开关种类					
				1pole 单极			2 poles 双极		
				Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子	Solder terminal 焊接端子	Screw terminal 螺丝端子	Quick terminal 快插端子
LT3 Water proof type 防水款	ON	—	OFF	LT3110A	LT3110B	LT3110C	LT3210A	LT3210B	LT3210C
	ON	—	ON	LT3120A	LT3120B	LT3120C	LT3220A	LT3220B	LT3220C
	(ON)	—	ON	LT3121A	LT3121B	LT3121C	LT3221A	LT3221B	LT3221C
	ON	OFF	ON	LT3130A	LT3130B	LT3130C	LT3230A	LT3230B	LT3230C
	(ON)	OFF	ON	LT3131A	LT3131B	LT3131C	LT3231A	LT3231B	LT3231C
	(ON)	OFF	(ON)	LT3132A	LT3132B	LT3132C	LT3232A	LT3232B	LT3232C

Dimensions 外形尺寸

LT3 单组		LT3 双组	
LT3 : 1 Pole		LT3 : 2 Pole	

series foot switch

LF系列脚踏开关



LF



Features 特点

- * 结构坚固，机械强度高
- * 内置高品质开关，质量可靠
- * 配线可以按照客户需求定制
- * 具有较高的防护性能
- * 广泛应用于冲压机械，自动化机械，医疗器械等领域

- * Strong structure, high mechanical strength.
- * The quality of switches inside are reliable, which are made by us.
- * The length of cable can be customized by requirement.
- * Have a high protection degree.
- * Widely applied in punching machinery, automation machine, medical apparatus etc.

Product Ordering 产品选型

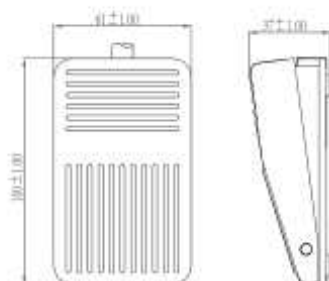
LF	1
LF series foot switch LF系列脚踏开关	Product type 产品类型

Contact Form 接触方式

A	B	C

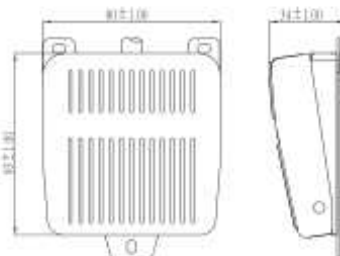
LF series foot switch

LF-01



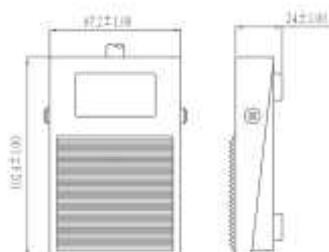
Rating 额定值	10A 250VAC
Contact form 接触方式	B-
Operating force 操作压力	0.7kg
Case material 外壳材质	Plastic 塑料
Cable 电线	2C*0.5m ² *0.3m

LF-02



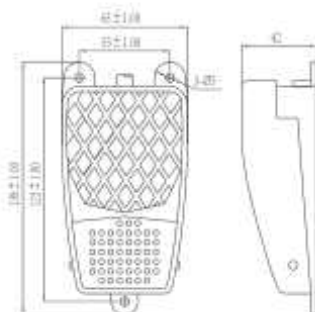
Rating 额定值	10A 250VAC
Contact form 接触方式	A
Operating force 操作压力	0.7kg
Case material 外壳材质	Plastic 塑料
Cable 电线	3C*0.5m ² *0.3m

LF-10



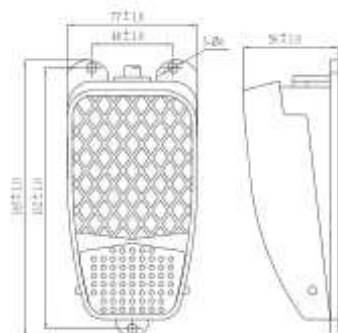
Rating 额定值	10A 250VAC
Contact form 接触方式	A
Operating force 操作压力	0.9kg
Case material 外壳材质	Steel 钢板
Cable 电线	3C*0.5m ² *0.3m

LF-21



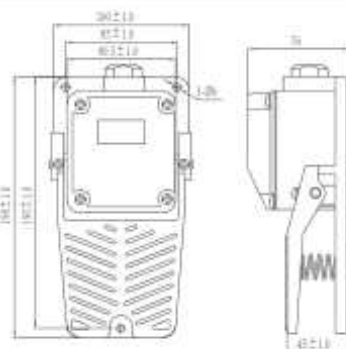
Rating 额定值	10A 250VAC
Contact form 接触方式	A
Operating force 操作压力	1.2kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	3C*0.5m ² *0.3m

LF-22



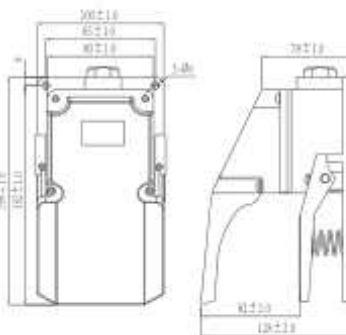
Rating 额定值	10A 250VAC
Contact form 接触方式	A
Operating force 操作压力	1.2kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	3C*0.5mm ² *0.3m

LF-30



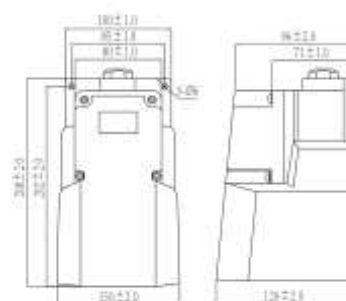
Rating 额定值	15A 250VAC
Contact form 接触方式	A
Operating force 操作压力	3.2kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

LF-31



Rating 额定值	15A 250VAC
Contact form 接触方式	A
Operating force 操作压力	3.2kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

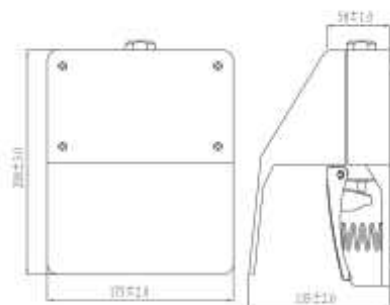
LF-32



Rating 额定值	15A 250VAC
Contact form 接触方式	A
Operating force 操作压力	3.2kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

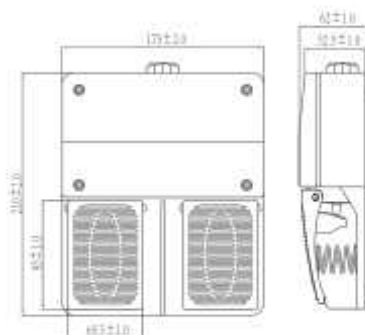
LF series foot switch

LF-60



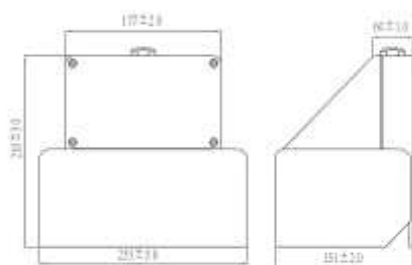
Rating 额定值	15A 250VAC
Contact form接触方式	2°C
Operating force操作压力	2.8kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

LF-61



Rating 额定值	15A 250VAC
Contact form接触方式	2°C
Operating force操作压力	2.8kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

LF-62



Rating 额定值	15A 250VAC
Contact form接触方式	2°C
Operating force操作压力	2.8kg
Case material 外壳材质	Aluminum alloy 铝合金
Cable 电线	Without cable 不带电线

IPZ

Features 特点

- * 额定值: 10A 250VAC
 - * 质量稳定, 可靠
 - * 自带保险丝座, 保障设备安全
 - * 已取得CCC, UL认证
 - * 广泛应用于电子设备, 仪器仪表, 家用电器等领域
- * Rating: 10A 250VAC
 - * The quality is stable and reliable
 - * With fuse holder, which could protect equipment
 - * CCC, UL approvals
 - * Widely applied in electronic facilities, instrument and meters, home appliances etc.

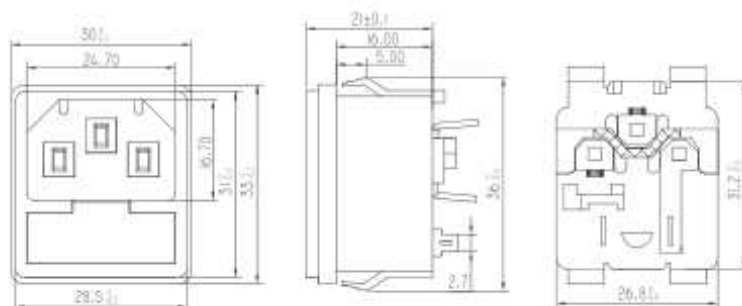
Product Ordering 产品选型

IPZ	1
IPZ series AC power socket IPZ 系列AC电源插座	Product type 产品类型

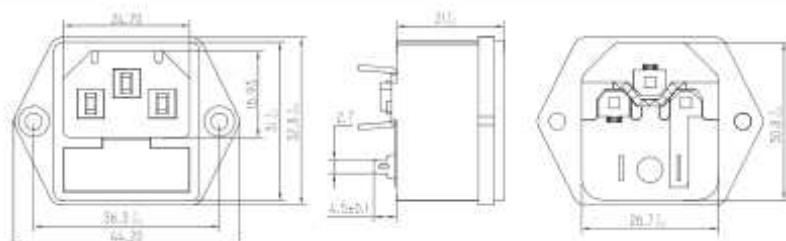
Characteristics 产品特征

Rated Current 额定电流	10A 250VAC
Insulation Resistance 绝缘电阻	100MΩ min. 100MΩ 最小
Contact Resistance 接触电阻	0.03MΩ max. 0.03MΩ 最大
Dielectric Intensity 耐压强度	2000VAC, 1 min. 2000VAC, 1分钟
Ambient Temperature 环境温度	-40℃ ~ +85℃
Operational Life 使用寿命	1,000,000 Times 次

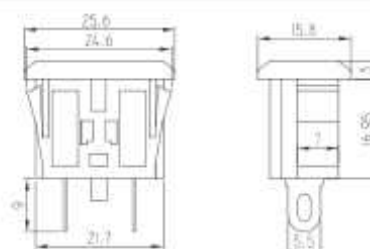
IPZ-3



IPZ-4



IPZ-5



series overload protection breaker

LMB1系列过载保护断路器

LMB1

Features 特点

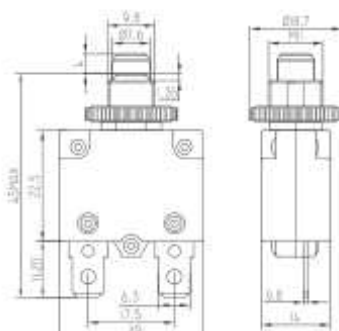
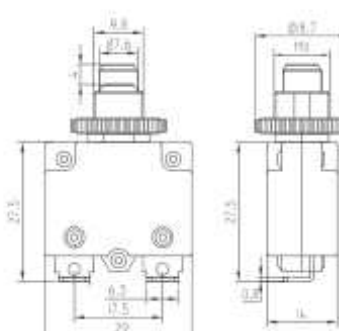
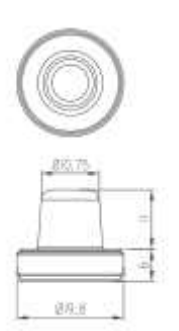
- * 采用双金属材料，断开速度灵敏，稳定可靠
- * 安装方便，使用寿命长
- * 防护帽可供选择
- * 广泛应用于发电机，电动机，清洗机，电动工具等
- * Use bimetal material, fast break, high reliability.
- * Various rating are available for choice.
- * Easy installing, long life.
- * Protection cap are available.
- * Widely applied in alternator, motor, washing machine, electric tool etc.

Characteristics 产品特征

Insulation Resistance 绝缘电阻	100M Ω min. 100M Ω 最小
Contact Resistance 接触电阻	40m Ω max. 40m Ω 最大
Dielectric Intensity 电介强度	1500V AC, 1 min. 1500V AC, 1 分钟
Electrical Life 电气寿命	100,000 min. 100,000 最小
Ambient Temperature 环境温度	-25-85 $^{\circ}$ C

Product Ordering 产品选型

LMB1	1	2	3
Overload protection breaker LMB1 series 过载保护断路器LMB1系列	Rated current 额定电流	Terminal type 接线端子类型	Protection cap 保护套
	05: 5A 08: 8A 10: 10A 15: 15A 20: 20A	A: #250 quick connect terminal #250快插端子 B: Right side bend terminal 右侧弯曲端子	Without protection cap 无保护套 F: With protection cap 带保护套

LMB-□A	LMB-□B	Protection cap 防护帽
 	 	 

PBS

Features 特点

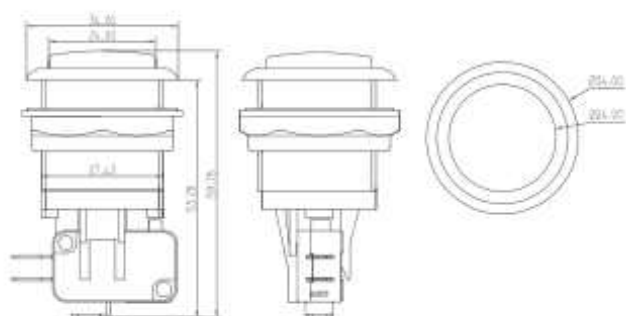
- * 动作灵敏，安装方便
- * 使用寿命长
- * 多种颜色可供选择
- * 一些款式可选配KW7系列微动开关
- * 一些款式可选配LED灯
- * 广泛应用于游戏机，自动化等领域
- * Snap action, easy installing
- * Long operating life
- * Various colors are available for choice
- * KW7 series micro switch is available for some types.
- * LED light is available for some types.
- * Widely applied in game machines, automation etc.

Product Ordering 产品选型

PBS	1	2	3
PBS series push button switch PBS 系列按钮开关	Switch type 开关类型	Color code 颜色代号	LED light 附带灯
		R: Red 红色 Y: Yellow 黄色 B: Blue 蓝色 G: Green 绿色 P: Pink 粉红色 W: White 白色	Without LED 不带LED灯 L: With LED 带LED灯

PBS - 001 R ☐

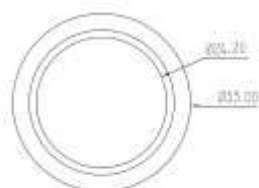
Y
B
G



PBS series push button switch

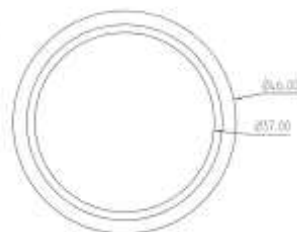
PBS - 003

Y
B
G
R



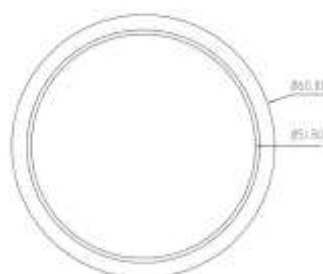
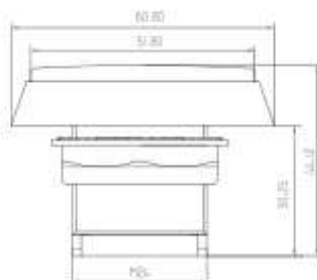
PBS - 004

Y
B
G
R
W



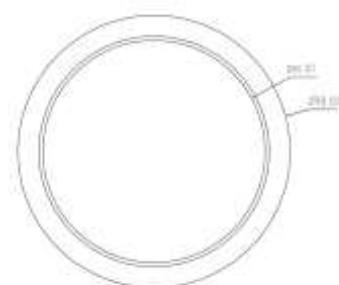
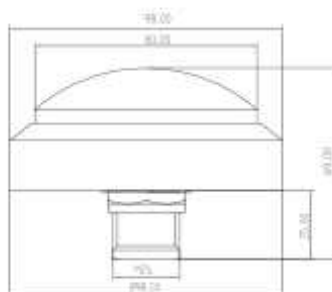
PBS - 005

Y
B
G
R
W

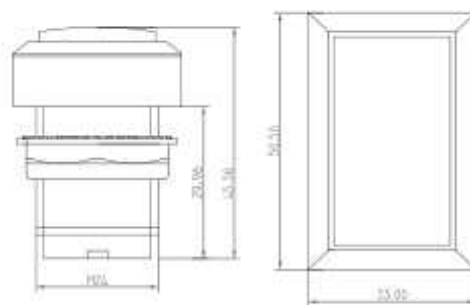


PBS - 006

Y
B
G
R
W

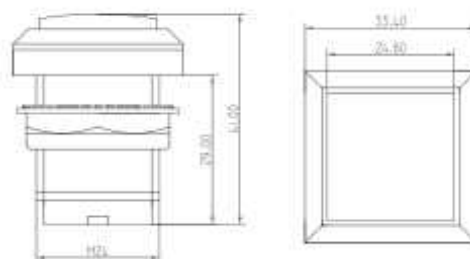


PBS - 007 Y □



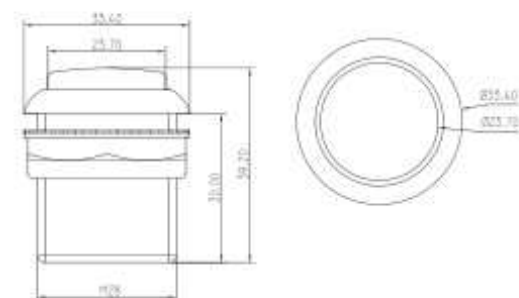
Y
B
G
R
W

PBS - 008 Y □



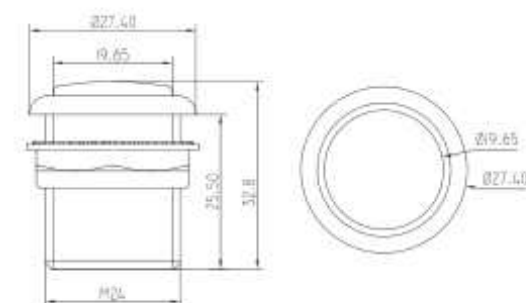
Y
B
G
R
W

PBS - 009 Y □



Y
B
G
R
P

PBS - 010 Y □



Y
B
G
R
P



South Korea Official Branch
Inspirnet. Co., Ltd.

Add : #804, 8F, Woominuww, 121, Dongtan-daero 23-gil,
Hwaseong-si, Gyeonggi-do, Republic of Korea , Zip code: 18468
Tel : 031-203-8921 **Fax :** +82-31-206-8633
Site : www.inspirnet.com , **Blog:** <https://blog.naver.com/inspirnet0825>
E-Mail : martin@inspirnet.com

浙江乐马电气有限公司

浙江省乐清经济开发区纬十八路301号 325600
电话: 0577-27809988 27809827 27809823
传真: 0577-27809828

ZHEJIANG LEMA ELECTRIC CO.,LTD.

No.301, Wei 18 Road, Yueqing Economic
Development Zone, Wenzhou, Zhejiang, China 325600
Tel: 0086-577-27809988 27809827 27809823
Fax: 0086-577-27809828

Email

Domestic market 国内市场: lema@chinalema.com
International market 国际市场: info@chinalema.com

Website

www.chinalema.com

本产品手册资料由乐马Lema印制, 仅用于说明本系列产品的相关信息。乐马Lema随时可能因技术升级或采用更新的生产工艺而改进本手册有关内容。或对本手册的印刷错误及不准确的信息进行必要的改进和更改。恕不另行通知。商家订购时请随时联系本公司, 以证实有关信息。

编号 LM1809A

