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# INDUSTRIALIAUTOMATION

## 工控自动化选型手册

行程开关 Travel switch | 限位开关 Limit switch
脚踏开关 Foot switch | 微动开关 Microswitch
拉绳开关 Rope switch | 安全门开关 Safety door switch
十字限位开关 Cross limit switch | 起升限位器 Lifting height stopper

南马电气有限公司
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CE certificate（LVD）by TUV Rheinland



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CERTIFICATION

南马电气

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CHNANMA®



# NM-8 立式限位开关 Vertical Limit Switch

## 特点 Features

◎ 双回路型限动开关
◎ 结构坚固，由锌合金及强化塑胶组成
◎ 体积小，可防水、防油
◎ 内藏触点座有双簧片机构，机械寿命更长
◎ 具有较大的过行程
◎ 使配线更加简易的导管设计
◎ 引动器种类多，方便使用

◎Double circuit type of limit switch
◎High mechanical strength, consists of intensive plastic and aluminum cast
◎Small size, water-proof and oil-proof construction
◎Built-in contact box has double-spring and long mechanical life
◎Smooth operation with larger over travel distance
◎Conduit design for convenient cabling
◎Various actuators for different applications

## 接点型式 Contact Form

常开 NO 13 — 14 常开 NO
常闭 NC 11 — 12 常闭 NC

## 额定值 Ratings

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

注：1、电感性负载之功率因素在 0.4 以上 (AC)。时间常数在 7msec 以下 (DC)。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 5mm 至 0.5m/s<br>5mm-0.5m/s |
| 动作频率 Operating frequency | 电气：30 次 / 分<br>Electical：30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅<br>10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G ’ S)<br>误动作耐久 :300m/Sec2( 约 30G ’ S)<br>Mechanical durable: 1, 000m/Sec2 (about 100G'S)<br>Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+70℃ ( 没有结冰 )<br>Using：-20~+70℃ ( With no icing ) |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上<br>500,000 operations above |
| 保护构造 Degree of protection | IP65 |

## 动作特性 Operating Characteristics

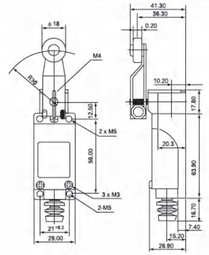
| 型号 Model | NM-8 | NM-8104 | NM-8108 | NM-8107 | NM-8111 | NM-8112/8122 | NM-8166/8167/8168/8169 |
|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 750g | 750g | 750g | 900g | 900g | 150g |
| 回弹力 Release force | RF( 最小 )(Min.) | 100g | 100g | 100g | 150g | 150g | - |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 20 ° | 20 ° | 20 ° | 1.5mm | 1.5mm | 30mm |
| 过行程 Over travel | OT( 最小 )(Min.) | 50 ° | 50 ° | 50 ° | 4mm | 4mm | - |
| 行程移动分辨率 Movement differential | MD( 最大 )(Max.) | 12 ° | 12 ° | 12 ° | 1mm | 1mm | - |
| 动作位置 Operating position | OP(mm.) | - | - | - | 26 ± 0.8mm | 37 ± 0.8mm | - |



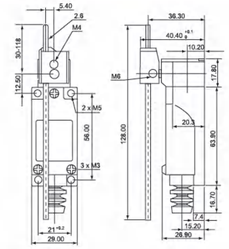


## NM-8 立式限位开关 Vertical Limit Switch


NM-8104




NM-8107

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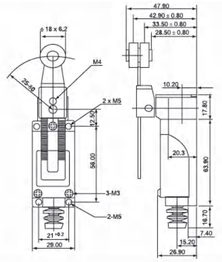
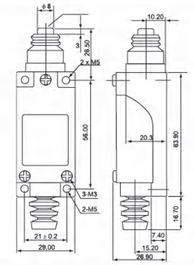
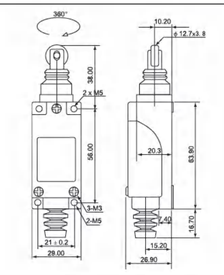


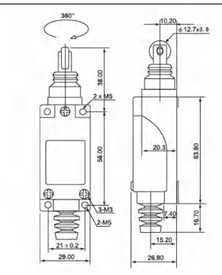

NM-8111



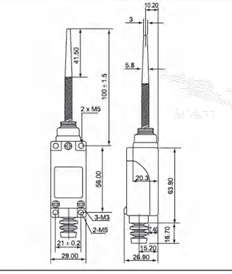

NM-8112



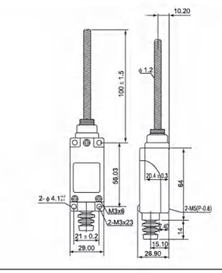

NM-8122



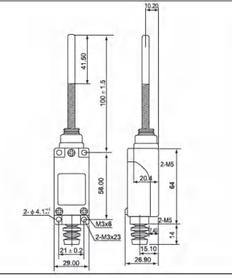

NM-8166



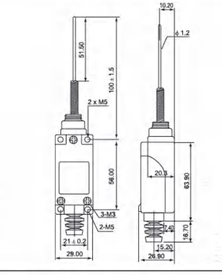

NM-8167




NM-8168




NM-8169



CHNANMA®



# D4V 立式限位开关
Vertical Limit Switch

## 特点 Features

◎ 双回路型限动开关
◎ 结构坚固，由锌合金及强化塑胶组成
◎ 体积小，可防水、防油
◎ 内藏触点座有双簧片设计，机械寿命长
◎ 具有较大的过行程
◎ 引动器种类多，方便使用
◎ 优化尾部出线设计，以提高密封性能

◎Double circuit type of limit switch
◎High mechanical strength，consists of intensive plastic and aluminum cast
◎Small size，water-proof and oil proof construction
◎Built-in contact box has double-spring and long mechanical life
◎Smooth operation with larger over travel distance
◎Various actuators for different application
◎Optimize tail line design to improve sealing performance

## 接点型式 Contact Form

常开 NO 3 — 4 常开 NO
常闭 NC 1 — 2 常闭 NC

## 额定值 Ratings

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

注：1、电感性负载之功率因素在 0.4 以上 (AC)。时间常数在 7msec 以下 (DC)。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES：1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 5mm 至 0.5m/s<br>5mm-0.5m/s |
| 动作频率 Operating frequency | 电气 :30 次 / 分<br>Electical: 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. ( below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅<br>10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久：1,000m/Sec2( 约 100G ' S)<br>误动作耐久：300m/Sec2( 约 30G ' S)<br>Mechanical durable：1, 000m/Sec2 (about 100G'S)<br>Malfunction：300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时：-20~+70℃ ( 没有结冰 )<br>Using：-20~+70℃ ( With no icing ) |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上<br>500,000 operations above |
| 保护构造 Degree of protection | IP65 |

## 动作特性 Operating Characteristics

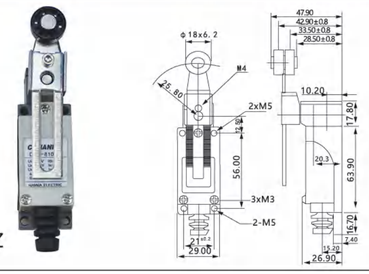
| 型号 Model | D4V-8 □ N | D4V-8104N<br>D4V-8105N | D4V-8108N<br>D4V-8109N | D4V-8107N | D4V-8111N | D4V-8112N<br>D4V-8122N | D4V-8166N/8167N/<br>8168N/8169N |
|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 750g | 750g | 750g | 900g | 900g | 150g |
| 回弹力 Release force | RF( 最小 )(Min.) | 100g | 100g | 100g | 150g | 150g | - |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 20 ° | 20 ° | 20 ° | 1.5mm | 1.5mm | 30mm |
| 过行程 Over travel | OT( 最小 )(Min.) | 50 ° | 50 ° | 50 ° | 4mm | 4mm | - |
| 行程移动分辨率 Movement differential | MD( 最大 )(Max.) | 12 ° | 12 ° | 12 ° | 1mm | 1mm | - |
| 动作位置 Operating position | OP(mm.) | - | - | - | 26 ± 0.8mm | 37 ± 0.8mm | - |



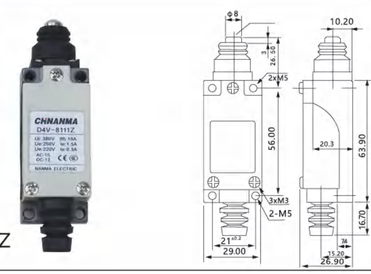


## D4V 立式限位开关 Vertical Limit Switch

D4V-8108Z



D4V-8111Z



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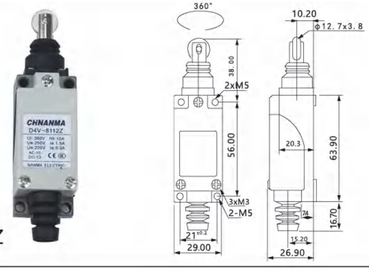

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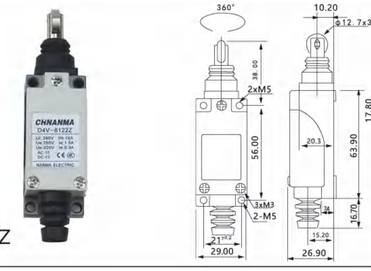
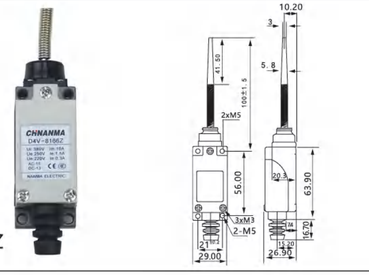
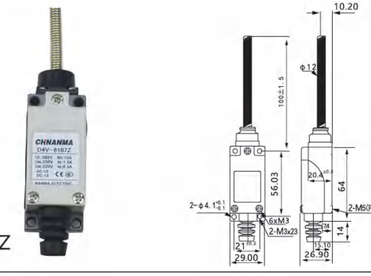


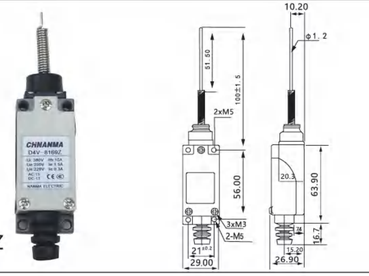
D4V-8166Z



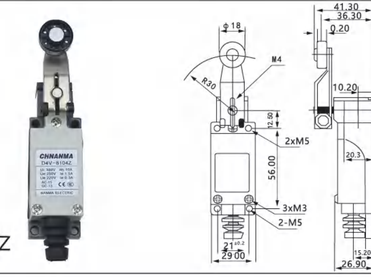
D4V-8167Z



D4V-8169Z



D4V-8104Z



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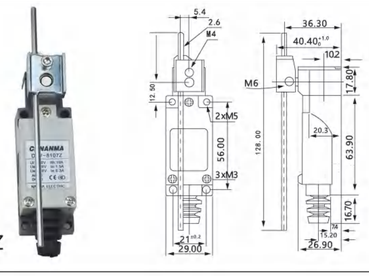


D4V- 机芯 Driving mechanism



CHNANMA®




# LSA 立式限位开关 Vertical Limit Switch

## 特点 Features

◎ 双回路型限动开关
◎ 结构坚固，由锌合金及强化塑胶组成
◎ 可防水、防油
◎ 内藏触点座有双簧片设计，机械寿命长
◎ 具有较大的过行程
◎ 三方向出线，方便使用

◎Double circuit type of limit switch
◎High mechanical strength, consists of intensive plastic and aluminum cast
◎Water-proof and oil proof construction
◎Built-in contact box has double-spring and long mechanical life
◎Smooth operation with larger over travel distance
◎Three way outgoing line, easy to use

## 接点型式 Contact Form

常开 NO 13 — 14 常开 NO
常闭 NC 11 — 12 常闭 NC

## 额定值 Ratings

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

注：1、电感性负载之功率因素在 0.4 以上 (AC)。时间常数在 7msec 以下 (DC)。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 5mm 至 0.5m/s<br>5mm-0.5m/s |
| 动作频率 Operating frequency | 电气 :30 次 / 分<br>Electical: 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅 10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec²( 约 100G ' S)<br>误动作耐久 :300m/Sec²( 约 30G ' S)<br>Mechanical durable: 1, 000m/Sec² (about 100G'S)<br>Malfunction: 300m/Sec² (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+70℃ ( 没有结冰 )<br>Using：-20~+70℃ ( With no icing ) |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 300,000 次以上<br>300,000 operations above |
| 保护构造 Degree of protection | IP66 |

注 :导管连接器尺寸常规默认为 M18x1.5；导管连接器尺寸 PG11.5，型号加 (-P)，例：LSA-012-P。

NOTES: The default size of conduit connector is M18x1.5.Conduit connector size is PG11.5, with product model number plus (-P), example:LSA-012-P.

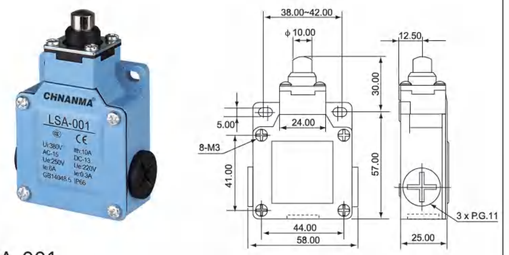
## 动作特性 Operating Characteristics

| 型号 Model | LSA | LSA-001 | LSA-003 | LSA-012 | LSA-021 | LSA-031 | LSA-061 | LSA-071 | LSA-081 |
|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 800g | 800g | 800g | 400g | 400g | 150g | 150g | 150g |
| 回弹力 Release force | RF( 最小 )(Min.) | 400g | 400g | 400g | 100g | 100g | 50g | 50g | 50g |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 1.8mm | 1.8mm | 1.8mm | 20 ° | 20 ° | 30mm | 30mm | 30mm |
| 触发位置 Tripping position | TP ±10% | 2.0mm | 2.0mm | 2.0mm | 22.5 ° | 22.5 ° | 22.5 ° | 22.5 ° | 22.5 ° |
| 行程移动分辨率 Movement differential | MD( 最大 )(Max.) | 1.2mm | 1.2mm | 1.2mm | 10 ° | 10 ° | 14 ° | 14 ° | 14 ° |
| 过行程 Over travel | OT( 最小 )(Min.) | 4.0mm | 4.0mm | 4.0mm | 75 ° | 75 ° | 20mm | 20mm | 20mm |
| 总行程 Total travel | TT( 最小 )(Min.) | 5.8mm | 5.8mm | 5.8mm | 95 ° | 95 ° | 50mm | 50mm | 50mm |
| 摇臂转换分角度 Rotary indexing | | | | | 22.5 ° | 22.5 ° | | | |

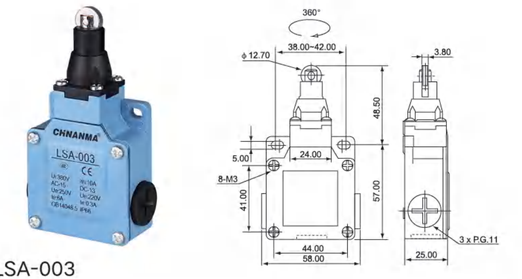




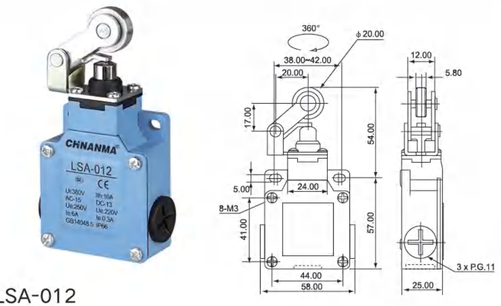
## LSA 立式限位开关 Vertical Limit Switch



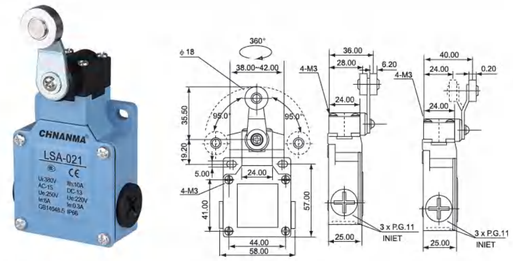

LSA-001



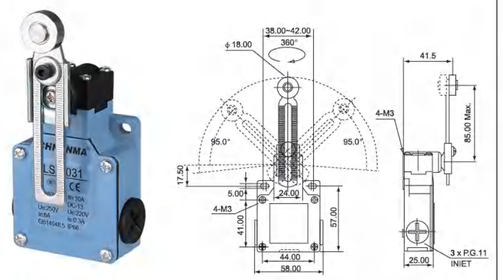

LSA-003



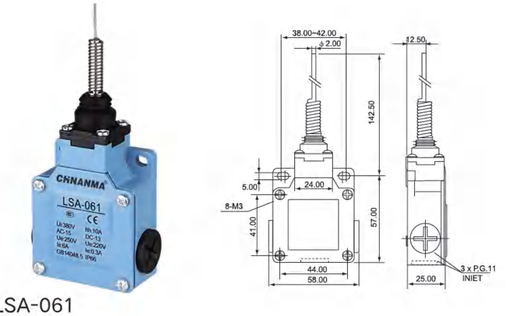

LSA-012



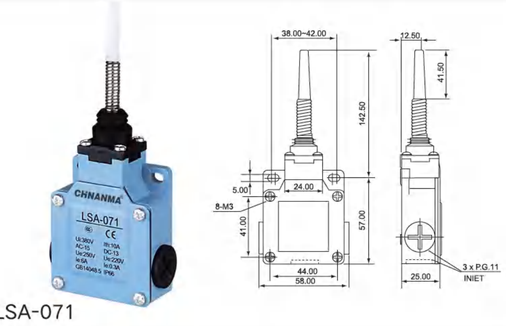

LSA-021



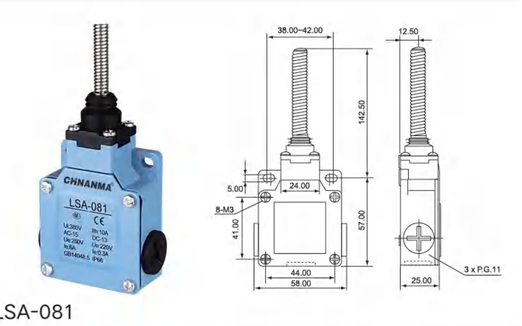

LSA-031




LSA-061




LSA-071




LSA-081




# WL/NMGW 限位开关 Limit Switch

## 特点 Features

◎ 双回路型限动开关
◎ 具有高机械强度的一体铸造铝合金外壳
◎ 具耐油、防水和防压结构
◎ 引动器种类多，方便使用
◎ 内藏接点座有双簧片设计，机械寿命长

◎Double-circuit type of limit switch
◎High mechanical strength, mainly consists of aluminum cast
◎Water-proof and oil-proof construction
◎Various actuators for different applications
◎Built-in contact box with double spring mechanism, longer mechanical life

## 接点型式 Contact Form

常开 NO 3 — 4 常开 NO
常闭 NC 1 — 2 常闭 NC

## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 10 | | 3 | 1.5 | 10 | | 5 | 2 |
| 250VAC | 5 | | 2 | 1 | 5 | | 3 | 1 |
| 480VAC | 3 | | 1.5 | 0.8 | 3 | | 1.5 | 0.8 |
| 600VAC | 1 | | 1 | 0.5 | 1.5 | | 1 | 0.5 |
| 8VDC | 10 | | 6 | 3 | 10 | | 6 | |
| 14VDC | 10 | | 6 | 3 | 10 | | 6 | |
| 30VDC | 6 | | 4 | 3 | 6 | | 4 | |
| 125VDC | 0.8 | | 0.2 | 0.2 | 0.8 | | 0.2 | |
| 250VDC | 0.4 | | 0.1 | 0.1 | 0.4 | | 0.1 | |

注：1、电感性负载：功率因素 =0.4；时间常数 =7msec。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 1mm 至 1m/s(CWLCA2 型 ) 1mm-1m/s |
| 动作频率 Operating frequency | 电气 :30 次 / 分<br>Electical: 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅 10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G ’ S)<br>误动作耐久 :300m/Sec2( 约 30G ’ S)<br>Mechanical durable: 1, 000m/Sec2 (about 100G'S)<br>Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+80℃ ( 没有结冰 )<br>Using：-20~+80℃（With no icing） |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上<br>500,000 operations above |
| 保护构造 Degree of protection | IP66 |

注：导管连接器尺寸常规默认为 M20x1.5，配电缆接头；导管连接器尺寸 PG13.5，型号加 (-P)，例：CWLCA2-2-P。

NOTES: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CWLCA2-2-P.

## 动作特性 Operating Characteristics

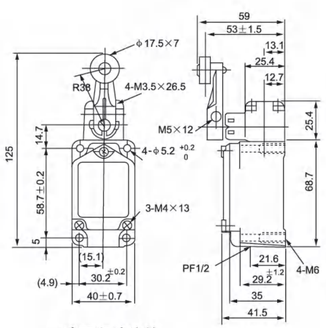
| 型号 Model | WL | WLCA2-2 | WLD2 | WLNJ | WLNJ-S2 | WLCA12-2-Q | WLCL | WLCA32-41<br>WLCA32-42 | WLD | WLNJ-2 | WLNJ-30 | WLD1 | WLD3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 1360g | 2720g | 150g | 29g | 1360g | 142g | 1200g | 2720g | 120g | 80g | 2720g | 2720g |
| 回弹力 Release force | RF( 最小 )(Min.) | 227g | 910g | - | - | 227g | 28g | - | 910g | - | - | 910g | 910g |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 20 ° | 1.7mm | 28mm | 28mm | 20 ° | 20 ° | 55 ° | 1.7mm | 28mm | 28mm | 1.7mm | 1.7mm |
| 过行程 Over travel | OT( 最小 )(Min.) | 30 ° | 5.6mm | - | - | 30 ° | 30 ° | 35 ° | 6.4mm | - | - | 5.6mm | 5.6mm |
| 行程移动分辨率 Movement differential | MD(最大)(Max.) | 12 ° | 1mm | - | - | 12 ° | 12 ° | - | 1mm | - | - | 1mm | 1mm |
| 总行程动作力 Total force | TF 最大 (Max.) | 2720g | - | - | - | 2720g | 200g | - | - | - | - | 2720g | 2720g |
| 总行程 Total travel | TT 最小 (Min.) | 50 ° | 6.5±0.8mm | - | - | 50 ° | 50 ° | OP:90±10 ° | OP:34±2.8mm | - | - | 6.5±0.8mm | 9±0.8mm |





## WLCA 立式限位开关 Vertical Limit Switch

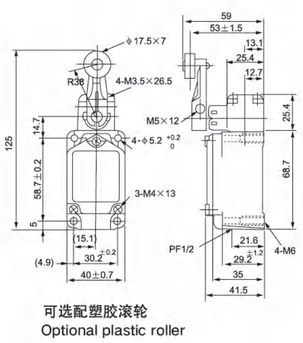



WLCA2-2
NMGW-05H

可选配塑胶滚轮
Optional plastic idler wheel

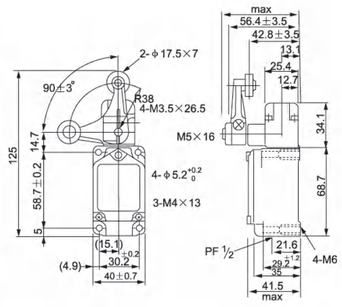



WLCA12-2Q
NMGW-06H

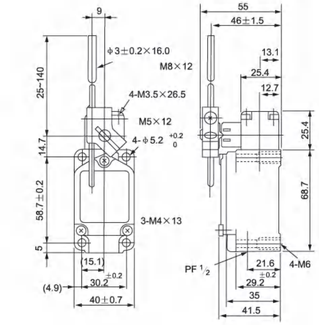
可选配塑胶滚轮
Optional plastic roller



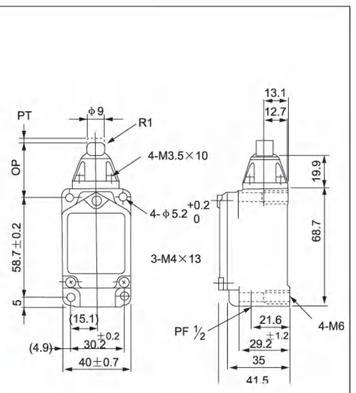

WLCA32-41
NMGW-13H



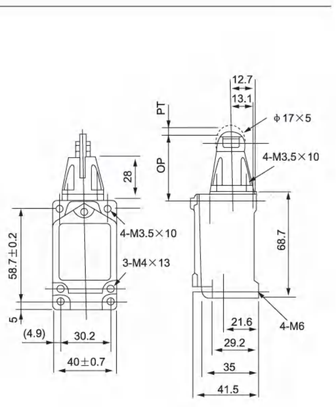

WLCL
NMGW-07H




WLD
NMGW-01H

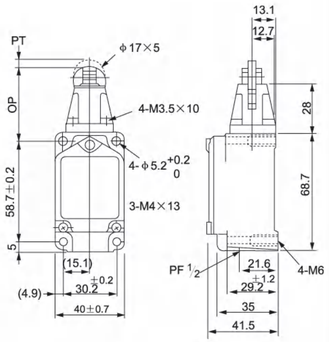



WLD1
NMGW-02H

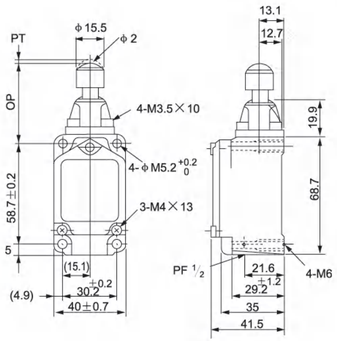
## WLCA 立式限位开关 Vertical Limit Switch



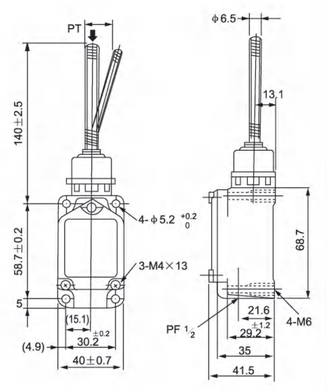

WLD2
NMGW-03H



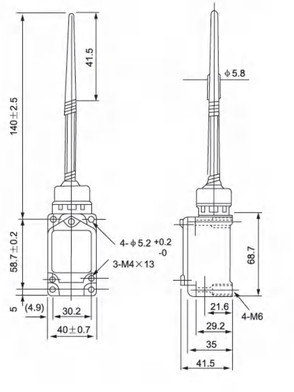

WLD3
NMGW-04H



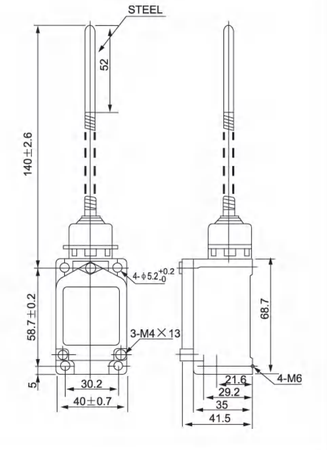

WLNJ
NMGW-08H



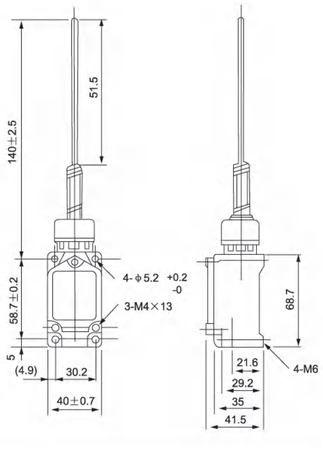

WLNJ-2
NMGW-09H




WLNJ-30
NMGW-11H




WLNJ-S2
NMGW-10H



# NM-3 防水型限位开关 Waterproof Type Limit Switch



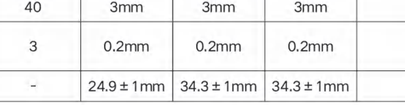

## 特点 Features

- ◎ 具有高机械强度的一体铸造铝合金外壳
- ◎ 具耐油，防水和防尘结构
- ◎ 引动器种类多，方便使用
- ◎ High mechanical strength, mainly consists of aluminum cast
- ◎ Water proof, oil proof and dust proof construction
- ◎ Various actuators for different applications

## 规格 Specifications

| | |
|---|---|
| 额定值 Rating | 2A 250VAC |
| 操作速度 Operation speed | 1mm~1m/s( 摆杆型 Swing rod type) |
| | 0.1mm~0.5m/s( 柱塞型 Plunger type) |
| 动作频率 Operating frequency | 电气 :30 次 / 分<br>Electical: 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10-55Hz, 1.5mm 双振幅<br>10 to 55HZ,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 : 1000mm/s2 以上 ( 约 100G 以上 )<br>误动作耐久 : 500mm/s2 以上 ( 约 50G 以上 )<br>Mechanical:Approx.1000m/s2 (Appprox.100G'S)<br>Electrical:Approx.500m/s2 (Approx.50G'S) |
| 周围温度 Ambient temperature | -20~+70 ℃ ( 没有结冰 )<br>Using：-20~+70℃ ( With no icing ) |
| 湿度 Humidity | < 95% RH |
| 电气寿命 Electrical life | 20 万次以上 200,000 operations/min. |
| 重量 Weight | 约 360g( 电缆线长 3m) 约 540g( 电缆线长 5m)<br>Approx.360g(cable length 3m)<br>Approx.540g(cable length 5m) |
| 防水等级 Protection level | IP67 |

## 接点型式 Contact Form




## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 5 (0.1) | | 1.5 | 0.7 | 3 | | 2.5 | 1.3 |
| 250VAC | 3 | | 1 | 0.5 | 2 | | 1.5 | 0.8 |
| 8VDC | 5 (0.1) | | 2 | | 5 | 4 | 3 | |
| 14VDC | 5 (0.1) | | 2 | | 4 | 4 | 3 | |
| 30VDC | 4 (0.1) | | 2 | | 3 | 3 | 3 | |
| 125VDC | 0.4 | | 0.05 | | 0.4 | 0.4 | 0.05 | |
| 250VDC | 0.2 | | 0.03 | | 0.2 | 0.2 | 0.03 | |

注：带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
Note: Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

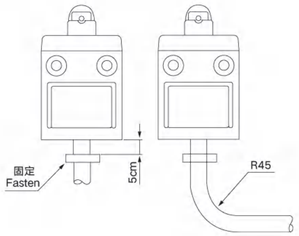
## 动作特性 Operating Characteristics

| 型号 Model | NM-3 | NM-3101 | NM-3102 | NM-3103 | NM-3104 (3107/3108) | NM-3111 | NM-3112 | NM-3113 | NM-3169 (3166/3167/3168) |
|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 11.77N | 11.77N | 11.77N | 5.69N | 17.65N | 17.65N | 17.65N | 1.47N |
| 回弹力 Release force | RF( 最小 )(Min.) | 4.41N | 4.41N | 4.41N | 1.47N | 4.41N | 4.41N | 4.41N | - |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 1.8mm | 1.8mm | 1.8mm | 25 | 1.8mm | 1.8mm | 1.8mm | 15 ° |
| 过行程 Over travel | OT( 最小 )(Min.) | 3mm | 3mm | 3mm | 40 | 3mm | 3mm | 3mm | - |
| 行程移动分辨率 Movement differential | MD( 最大 )(Max.) | 0.2mm | 0.2mm | 0.2mm | 3 | 0.2mm | 0.2mm | 0.2mm | - |
| 动作位置 Operating Position | TT 最小 (Min.) | 15.7 ± 1mm | 28.5 ± 1mm | 28.5 ± 1mm | - | 24.9 ± 1mm | 34.3 ± 1mm | 34.3 ± 1mm | - |

## 配线注意事项 Cabling Attention

配线需注意于离开关 5cm 处须加以固定，而电线之弯曲半径不得小于 R45cm，注意勿伤及电线绝缘体，以避免电线漏电等情形。

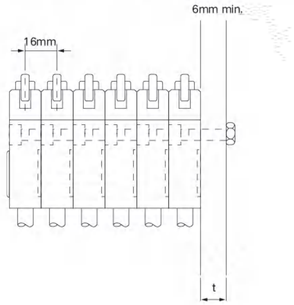
The switch bodies are filled with resin for sealing purposes. To avoid stressing the cable and switch body, fasten the switch at 5 cm or farther away from the switch body, should the wire be bent, the bending radius shall be at least 45mm.



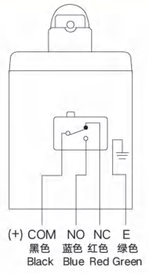

## 多连接使用的场合 Quantity Mounted Using Attention

需连接多组使用的场合时，最多可连接 6 组开关，连接时，开关表面之凹凸槽相互配合，另板厚 t 之尺寸应在 6mm 以上为适当。

A maximum of six switches may be mounted together as a switch bank.During the installation,the convex part of the switch back.The mounting panel shall be 6mm or thicker.



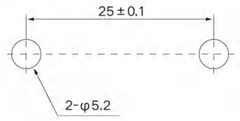

## 接点型式 Contact Form




## 装配孔尺寸 Mounting Holes

安装板发生翘曲或凸起之状态，会造成安装上之不良，安装板请经筛选确认后，再予以使用。

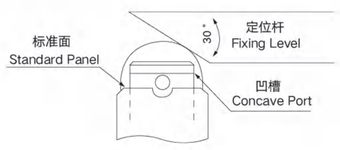
Mount the switch body to a rigid mounting panel using two M5 screws.




## 安装注意事项 Installation Attention

凸轮与定位杆等形状，频率及动作后移动等，将会影响使用寿命与精准度，因此建议定位杆之角度约 30°，而定位杆之表面粗糙度，以上，硬度 HV400-500，在设定开关之行程时，凹沟必须高于标准面之上为最适当之位置。

The service life and accuracy of switches will be effected by the shape of actuator operation frequency & over travel. So the angular of the fixing level should be about 30°, the surface finish of the fixing level should be over, the hardness is from HV400~500.When installing, the position of the concave part should be above the standard panel




请依下表所示选择最适当之旋转扭力，施行锁紧作业，以避免伤害开关本体。

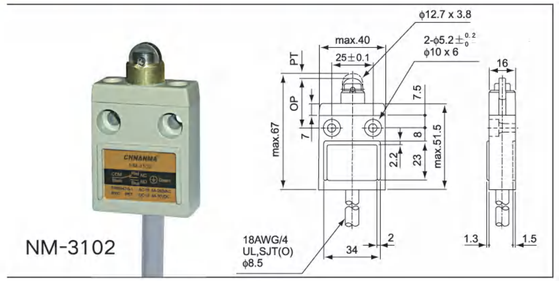
Recommended tightening torque according to the follwing form.

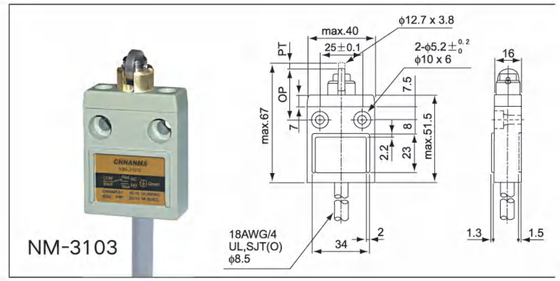
| 编号 Model | 螺丝尺寸 Screw type | 最适当之旋转扭力 Torque |
|---|---|---|
| 1 | M5 六角孔螺栓之固定螺丝<br>M5 fastening screws | 43.4~52lb.in<br>(50~60kgf.cm) |
| 2 | 头部 M3.5 之安装螺丝<br>M3.5 installing screws | 6.9~7.9lb.in<br>(8~9kgf.cm) |

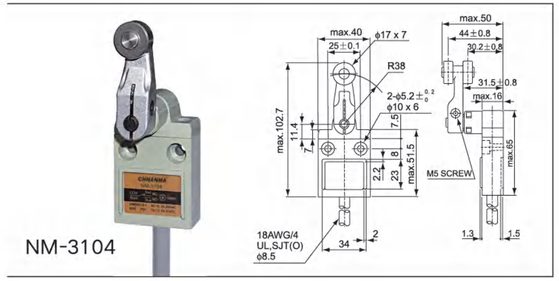


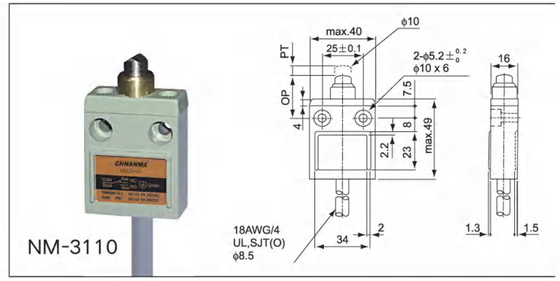


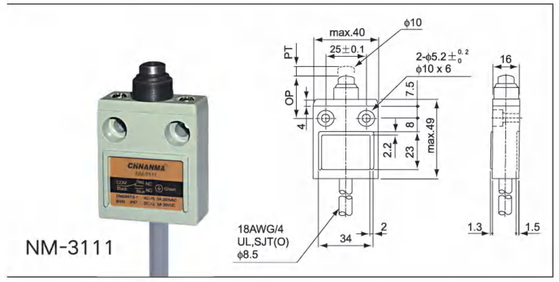
## 防水开关系列 Waterproof Switch

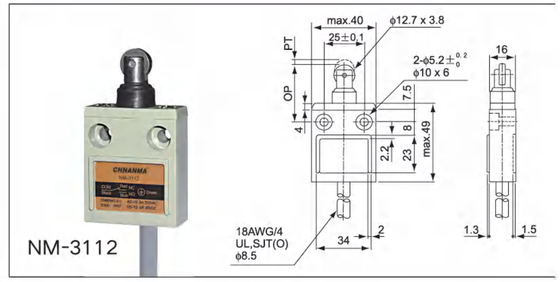


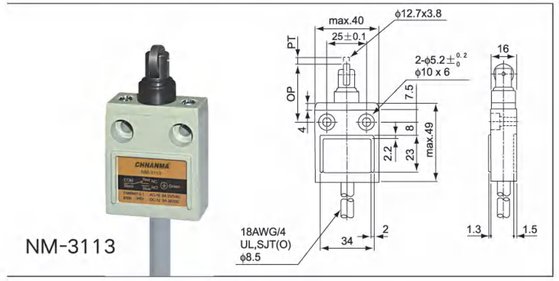



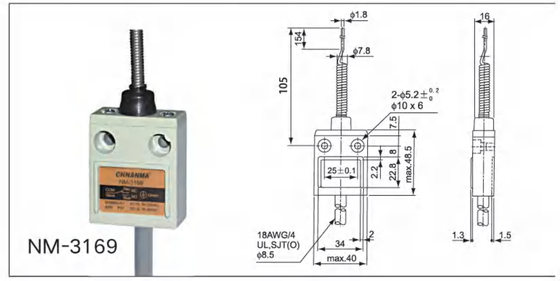



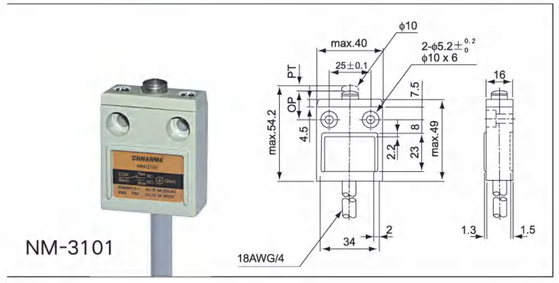



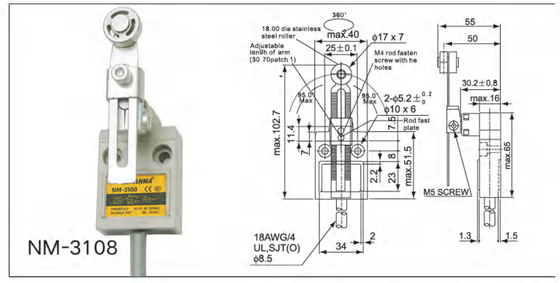



CHNANMA®



# NM/TZ-6 卧式限位开关 Horizontal Limit Switch

## 特点 Features

- ◎ 内藏 NM 卧式限位开关
- ◎ 具有高机械强度的一体铸造铝合金外壳
- ◎ 具耐油、防水和防压结构
- ◎ 额定值及特性同 NM 卧式限位开关
- ◎ 引动器种类多，方便使用

- ◎Built-in NM horizontal limit switch
- ◎High mechanical strength, mainly consists of aluminum cast
- ◎Water-proof and oil-proof construction
- ◎Same rated value and characteristic with NM horizontal limit switch
- ◎Various actuators for different applications

## 接点型式 Contact Form




## 额定值 Ratings

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

注：1、电感性负载之功率因素在 0.4 以上 (AC)。时间常数在 7msec 以下 (DC)。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 5mm 至 0.5m/s<br>5mm-0.5m/s |
| 动作频率 Operating frequency | 电气：20 次 / 分<br>Electical: 20 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 )<br>25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅 10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G＇S)<br>误动作耐久 :300m/Sec2( 约 30G＇S)<br>Mechanical durable: 1, 000m/Sec2 (about 100G'S)<br>Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+80℃ ( 没有结冰 )<br>Using：-20~+80℃（With no icing） |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上<br>500,000 operations above |
| 保护构造 Degree of protection | IP66 |

注：导管连接器尺寸常规默认为 M20x1.5，配电缆接头；导管连接器尺寸 PG13.5，型号加 (-P)，例：MN-6104-P。

NOTES: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:MN-6104-P .

## 动作特性 Operating Characteristics

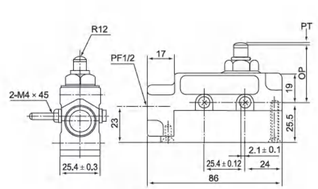
| 型号 Model | MN-6 | MN-6001 | TZ-6002 | TZ-6003 | TZ-6004 | TZ-6043 | TZ-6101 | TZ-6102 | TZ-6103 | TZ-6104 | TZ-6143 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 250~350g | 250~350g | | 570g | 570g | 800g | 500g | | 640g | 640g |
| 回弹力 Release force | RF( 最小 )(Min.) | 114g | 114g | | 170g | 170g | 240g | 100g | | 230g | 230g |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 0.4mm | 0.5mm | | 4mm | 4mm | 2mm | 2mm | | 5mm | 5mm |
| 行程移动分辨率 Movement differential | MD( 最大 )(Max.) | 0.05mm | 0.05mm | | 0.4mm | 0.4mm | 0.1mm | 0.12mm | | 0.4mm | 0.4mm |
| 过行程 Over travel | OT( 最小 )(Min.) | 5.5mm | 6.3mm | | 6mm | 6mm | 5mm | 3.5mm | | 6mm | 6mm |
| 总行程 Total travel | OP (mm.) | 38.2±0.8mm | 49.7±1mm | | | | 45.8±0.8mm | 49.7±0.8mm | | | |





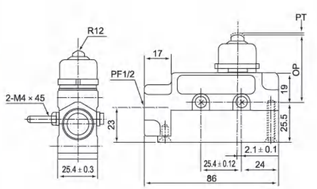
## NM-6 卧式限位开关 Horizontal Limit Switch





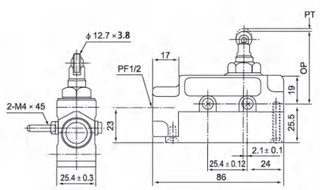

NM-6001





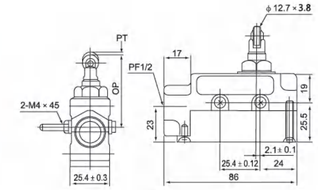

NM-6101





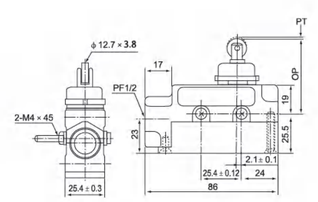

NM-6002





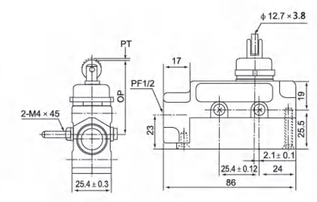

NM-6003





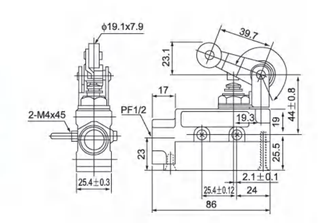

NM-6102





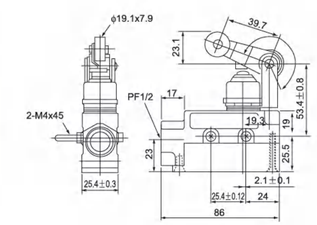

NM-6103





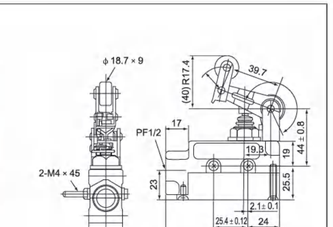

NM-6004





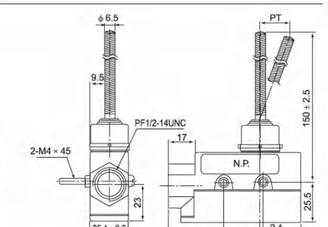

NM-6104






NM-6143






NM-6106




# NM93/D4NS 安全门限位开关 Safety door limit switches

## 型号说明 Model Number Structure

NM93 - ① - ② - ③ - ④ - ⑤

短款机械式 -D4NS　Short mechanical -D4NS
长方形电磁锁 -D4SL　Rectangular magnetic lock -D4SL
方形电磁锁 -D4NL　Square magnetic lock -D4NL

| 代号 designation | 说明 Instructions |
|---|---|
| ① | 设计序号 Design sequence number |
| ② | 接点方式：见下表 Contact mode: See the table below |
| ③ | 解锁钥匙形式：见下表 Unlock key form: See the table below |
| ④ | 头部代号：无：塑料款 J: 金属款 Head code: None: plastic J: metal |
| ⑤ | 锁定形式 电磁锁定 D 机械锁定 J<br>Locking form Electromagnetic locking D mechanical locking J |

| 型号 Model number | 开闭方式表述 Open and closed expression | 开闭状态 Open and closed state | 解锁钥匙形式③ Unlock key form | |
|---|---|---|---|---|
| D4NS（短款 short version） | B1(1AF)-K | 1NO 1NC | K01 | 直行式 Straight line type |
| | B2(1BF)-K | 2NC | K02 | 折弯式 Bending type |
| | C1(1CF)-K | 1NO 2NC | K03 | 底座直行式 Base straight line type |
| | C2(1DF)-K | 3NC | | |
| D4NL（正方形 square） | B1(1AF)-G | 1 NO 1 NC + 1 N0 1 NC | G01 | 直行式 Straight line type |
| | B2(1BF)-G | 2 NC + 1 N0 1 NC | G02 | 折弯式 Bending type |
| | C1(1CF)-G | 1 NO 2 NC + 1 N0 1 NC | G03 | 底座直行式 Base straight line type |
| | C2(1DF)-G | 3 NC + 1 NO 1 NC | | |
| | B1(1AF)-GK | 1 NO 1 NC + 1 NO 1 NC | GK04 | 宽体直行式 Wide body straight line type |
| D4SL（长方形 rectangle） | B2(1BF)-GK | 2 NC + 1 N0 1 NC | GK05 | 宽体折弯式 Wide body bending type |
| | C1(1CF)-GK | 1 NO 2 NC + 1 NO 1 NC | GK06 | 宽底座直行式 Wide base straight line type |
| | C2(1DF)-GK | 3 NC + 1 NO 1 NC | | |

注：导管连接器尺寸常规默认为 M20×1.5。
NOTE: The default size of conduit connector is M20x1.5.

## 规格 Specifications

| | |
|---|---|
| 额定电流 Rating | 3A 240VAC (A300) |
| 操作速度 Operating speed | 0.1m~0.5m/s |
| 动作频率 Operating frequency | 30 次 / 分 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下（初期）25mΩ2 max.(initial). |
| 绝缘电阻 Insulation resistance | 100mΩ 以上（在 500VDC 以下）<br>100mΩmin.(at 500VDC) |
| 绝缘电压 Rated insulation voltage(UI) | 400V |
| 电介强度 Dielectric strength | AC2500V/Umip 4KV |
| 振动 Vibration | 10 至 55HZ,1.5mm 双振幅<br>10 to 55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久：1000m/s2 以上（约 100G 以上）<br>误动作耐久：300m/s2 以上（约 30G 以上）<br>Mechanical：Approx.1000m/s2 (Approx.100G's)<br>Electrical：Approx.300m/s2(Approx.30G'S) |
| 使用温度 Ambient temperature | -20~+70℃（没有结冰）Using: -20~+70℃（With no icing） |
| 使用湿度 Ambient Humidity | <95% RH |
| 电气寿命 Electrical life | 15 万次以上 150,000 operations/min. |
| 防水等级 Protection level | IP65 (IEC 规格 Standard) |

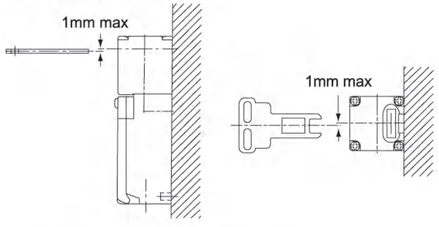
## 额定值 Ratings

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

## 使用注意事项 Cautions

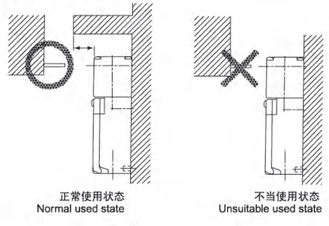
钥匙与插入孔之中心上下左右位置应在 1mm 以内，以避免机构磨耗和破坏。

To prevent the wear and the space should be within 1mm between the
key and middle of the insert hole.




使用开关时，应于上方设置一挡板，以防止钥匙过于插入使机构损坏。而挡板与开关间 a 之距离应在 3mm 以下，以防止不动作。

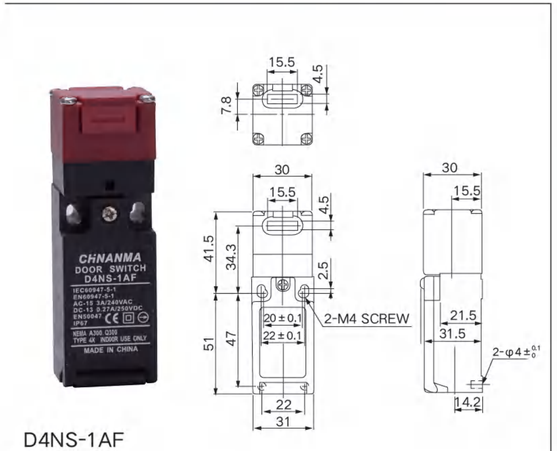
When in use,there should put a plate on the top to prevent the key overinsert.To prevent nonmovement, the space between the plate and the switch should be under 3 mm.



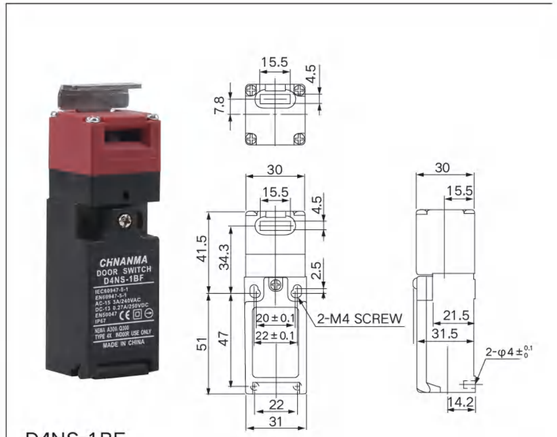




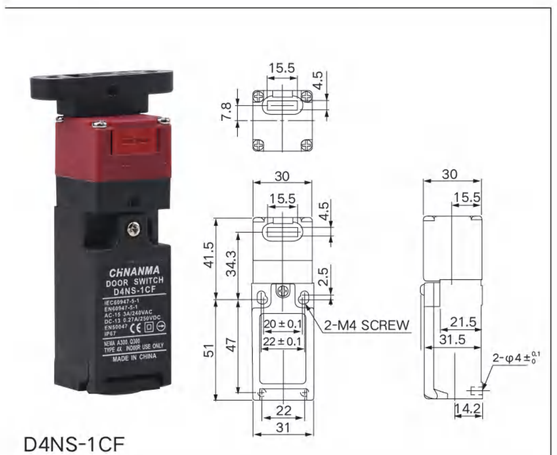

## 安全门开关限位 Safety door limit switches



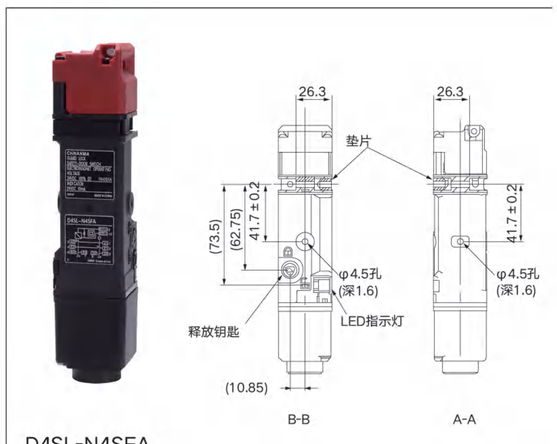

D4NS-1AF



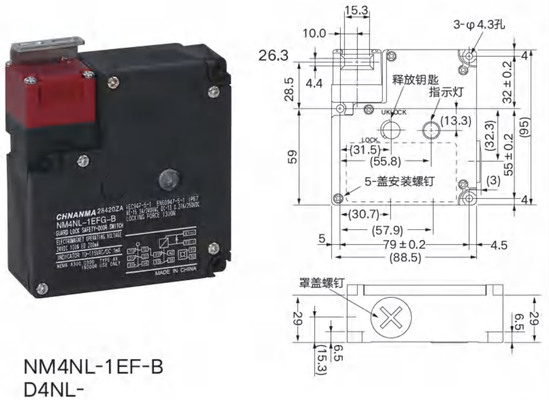

D4NS-1BF




D4NS-1CF




D4SL-N4SFA




NM4NL-1EF-B
D4NL-




安全开关锁扣

CHNANMA®



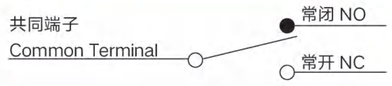
# NM-7 立式微动开关 Vertical Micro Switch

## 特点 Features

◎ 引动器种类广泛，其中包含动作位置可调整的款式 ( 如 AZ-7121)
◎ 外壳包覆强化塑胶、防水、防油，较 TM 型卧式限位开关有更高的机械强度，耐冲击

◎Various actuators and some with adjustable operating position (such as AZ-7121)
◎Shell covered with intensive plastic for water-proof and oil-proof. The mechanical strength is better than TM series of horizontal limit switch

## 接点型式 Contact Form




## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 10 | | 3 | 1.5 | 10 | | 5 | 2.5 |
| 250VAC | 10 | | 2.5 | 1.25 | 5 | | 3 | 1.5 |
| 480VAC | 3 | | 1.5 | 0.75 | 3 | | 1.5 | 0.75 |
| 8VDC | 10 | | 3 | 1.5 | 10 | | 6 | 5 |
| 14VDC | 10 | | 3 | 3 | 10 | | 6 | 5 |
| 30VDC | 8 | | 3 | 3 | 6 | | 5 | 2.5 |
| 125VDC | 0.5 | | 0.4 | 0.2 | 0.8 | | 0.05 | 0.05 |
| 250VDC | 0.25 | | 0.2 | 0.1 | 0.4 | | 0.03 | 0.03 |

注：1、电感性负载；功率因素 =0.4; 时间常数 =7msec。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 0.05mm 至 0.5m/s |
| 动作频率 Operating frequency | 电气 :20 次 / 分 Electical: 20 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 ) 25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 ) 100mΩ min. ( below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟 1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅 10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G ' S) 误动作耐久 :300m/Sec2( 约 30G ' S) Mechanical durable: 1, 000m/Sec2 (about 100G'S) Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+70℃ ( 没有结冰 ) Using : -20~+70℃ ( With no icing ) |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上 500,000 operations above |
| 重量 Weight | 约 60g About 60g |

注：导管连接器尺寸常规默认为 M20x1.5，配电缆接头；导管连接器尺寸 PG13.5，型号加 (-P)，例：CWLCA2-2-P。
NOTES: The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CWLCA2-2-P.

## 动作特性 Operating Characteristics

| 型号 Model | NM-7 | NM-7100 | NM-7110 | NM-7310 | NM-7311 | NM-7312 | NM-7120 | NM-7140 | NM-7121 | NM-7141 | NM-7124 | NM-7144 | NM-7166 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF( 最大 )(Max.) | 600g | 600g | 600g | 600g | 600g | 150g | 220g | 180g | 240g | 200g | 280g | 120g |
| 回弹力 Release force | RF( 最小 )(Min.) | 100g | 100g | 100g | 100g | 100g | 40g | 60g | 50g | 80g | 60g | 100g | |
| 预行程 Pre-travel | PT( 最大 )(Max.) | 2.0mm | 2.0mm | 2.0mm | 2.0mm | 2.0mm | 13.5mm | 8.5mm | 11.0mm | 6.5mm | 11mm | 6.5mm | 250mm |
| 过行程 Over travel | OT( 最小 )(Min.) | 0.8mm | 5.0mm | 6.0mm | 6.0mm | 6.0mm | 4.0mm | 2.5mm | 3.0mm | 2.0mm | 3.0mm | 2.0mm | 11mm |
| 行程移动分辨率 Movement differential | MD( 最大 ) (Max.) | 0.8mm | 0.8mm | 0.8mm | 0.8mm | 0.8mm | 3.2mm | 2.0mm | 2.4mm | 1.5mm | 2.4mm | 1.5mm | |
| 总行程动作力 Total force | OP(mm.) | 30.5±0.8mm | 44±1.2mm | 21.8±1.2mm | 33.3±1.2mm | 33.3±1.2mm | 25±1mm | 25±1mm | 40±1mm | 40±1mm | 50±1.2mm | 50±1.2mm | |
| 总行程 Total travel | FP | | | | | | 35mm | 32mm | | 46mm | | 56mm | |

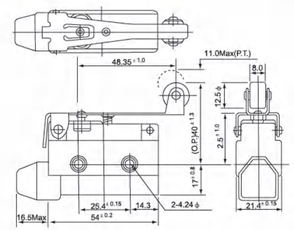




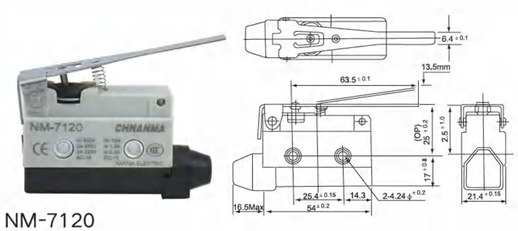
## 微动开关系列 MICRO SWITCH

NM-7121



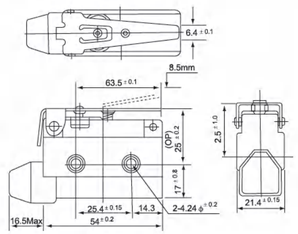


NM-7120

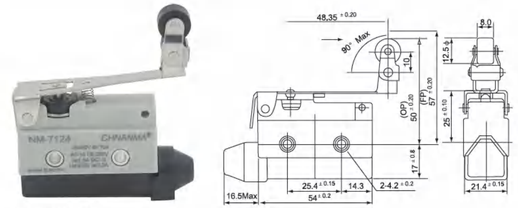


NM-7140



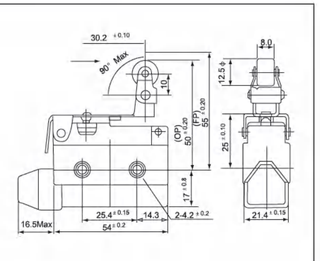


NM-7124



NM-7144





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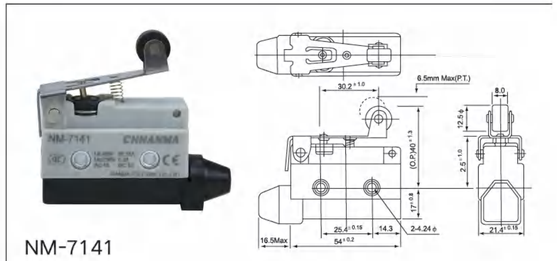
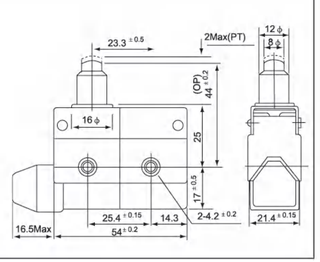
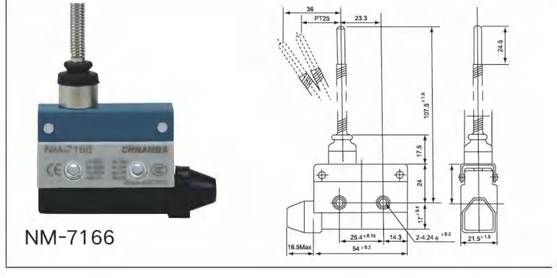


NM-7110



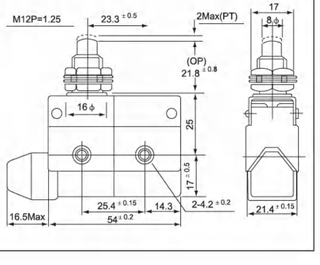


NM-7166

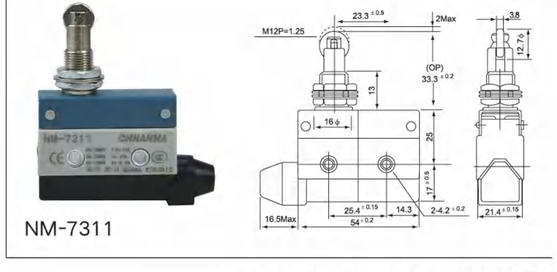


NM-7310

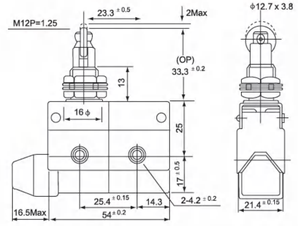




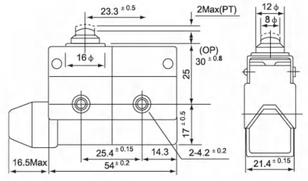
NM-7311



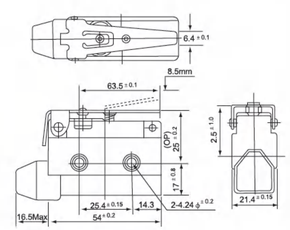
## 微动开关系列 MICRO SWITCH

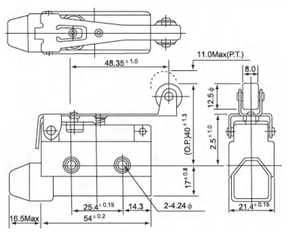

NM-7312

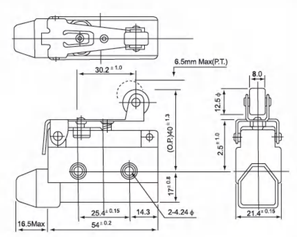

NM-7100

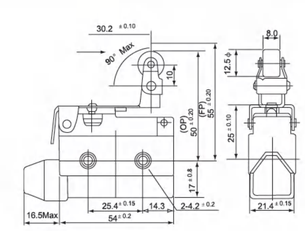

D4MC-1020

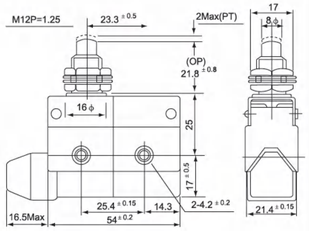

D4MC-2000

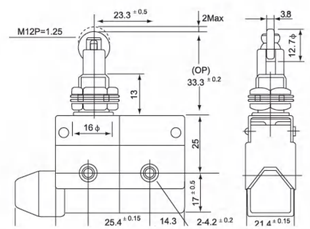

D4MC-2020

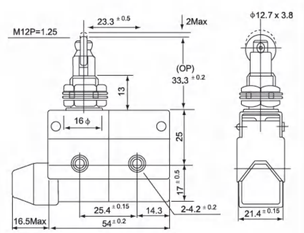

D4MC-3030

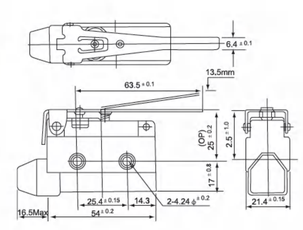

D4MC-5000


D4MC-5020


D4MC-5040

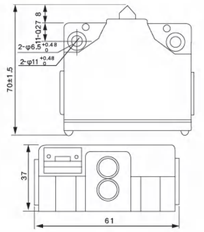




D4MC-1000

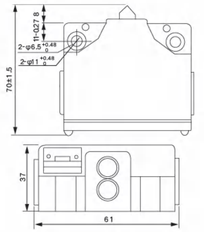




## LXZ1 高精度行程开关系列 LXZ1 High precision stroke switch series


LXZ1-02Z/N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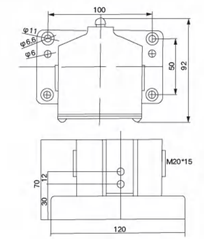


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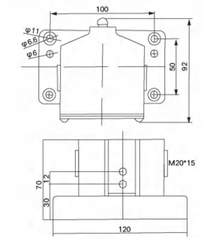


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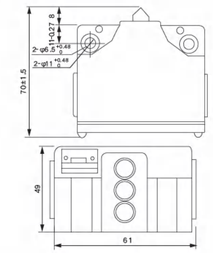


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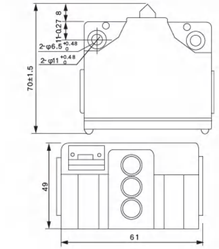


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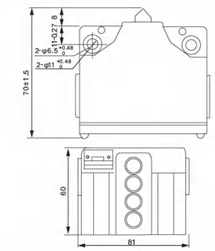


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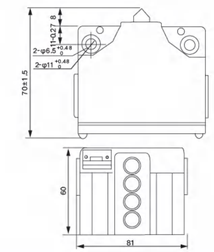


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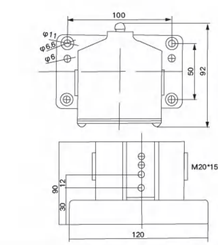


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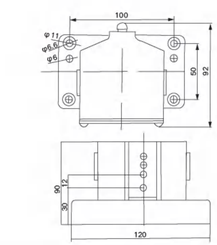



LXZ1-04L/W



# XCMD 防水型限位开关 Waterproof limit switch

## 特点 Features

- ◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
- ◎ 很适合空间比较局促，操作环境恶劣的机器。
- ◎ XCMD 与小型产品的操作头一样，也带有肯定断开触头，甚至还有可以用于安全领域的快动型产品。
- ◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
- ◎ It is suitable for machines with cramped space and harsh operating environment.
- ◎ XCMD, like the operating heads of small products, also comes with certain disconnect contacts, and there are even fast-moving products that can be used in the security field.

## 规格 /Specification

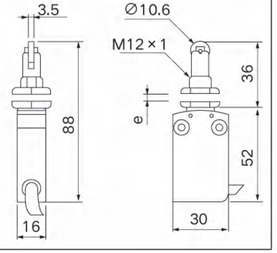
| 型号 Model number | | 小型 Osiconcept |
|---|---|---|
| 外壳 shell | | 金属 metal |
| 特性 peculiarity | | 本体或头部固定 Body or head fixed |
| Osiconcept 模块化 modularization | | 头部，本体和连接部件的模块化<br>Modularization of the head, body and connecting parts |
| 本体尺寸 Body size(W*H*D) mm | | 30*50*16 |
| 操作头<br>Operating head | | 线性运动 ( 直杆 ) 转动 ( 摇杆 ) 转动，万向<br>XCM D,XCK D,XCK P 和 XCK T 系列均使用相同的操作头<br>Linear motion (straight rod) rotation (rocker) rotation, universal XCM D,XCK D,XCK P and XCK T series all use the same operating head |
| 触点模块<br>Contact module | 2 对带肯定断开速动触点或 1C/O 触点 2 pairs of positive break quick contact or 1C/O contact | N/C + N/O; N/C +N/C |
| | 3 对带肯定断开功能的速动触点 3 Pairs of quick action contacts with a positive disconnect function | N/C +N/C +N/O |
| | 4 对带肯定断开功能的速动触点<br>4 Pairs of quick action contacts with a positive disconnect function | N/C + N/C + N/O+N/O |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | N/C +N/O 先断后合<br>Break first and then close |
| | 2 对慢动触点<br>2 pairs of slow acting contacts | / |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | N/C + N/C+ N/O 先断后合<br>Break first and then close |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | 成型电缆 2 对触点 :400V/6A；3 对触点 :400V/4A；<br>4 对触点 :400V/3AFormed cable 2 pairs of contacts :400V/6A; 3 pairs of contacts :400V/4A; 4 pairs of contacts :400V/3A |
| 防护等级 IP/IK Protection level IP/IK | | IP 66，IP 67，IP 68，IKO6 |
| 连接 connect | 接头 splice | 集成或远程 M12 或远程的 7/8" 16 UN 接头 Integrated or remote M12 or remote 7/8" 16 UN connector |

## 非标型号描述 Non-standard model description

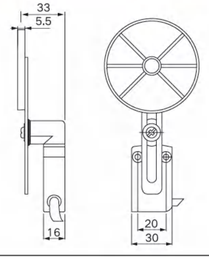
| 型号<br>Model number | 小型 Osiconcept |
|---|---|
| XCMD2121L1 | 滚轮斜压式<br>Roller oblique pressure type |
| XCMD2122L1 | 陶瓷棒转臂式<br>Ceramic rod rotary arm type |
| XCMD2113L1 | 圆柱加长推杆式<br>Cylindrical extension pusher type |
| XCMD21G1L1 | 圆柱螺纹推杆式<br>Cylindrical thread push-rod type |
| XCMD2127L1 | 滚轮外向斜压式<br>Roller outward baroclinic type |
| XCMD2102M12 | 滚轮推杆式 4 芯航空插<br>Roller push-rod type 4-core aviation insert |
| XCMD2102C12 | 滚轮推杆式 5 芯航空插<br>Roller push-rod type 5-core aviation insert |

"L1" 表示 1 米线，"L2" 表示 2 米线
"L1" means 1 meter line, "L2" means 2 meter line

## 限位开关 Limit switch


XCMD21F0L1

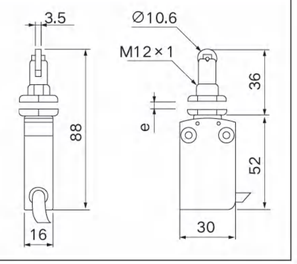




XCMD2149L1

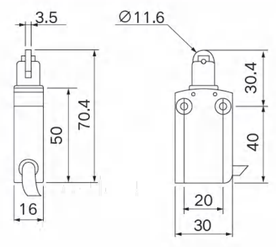




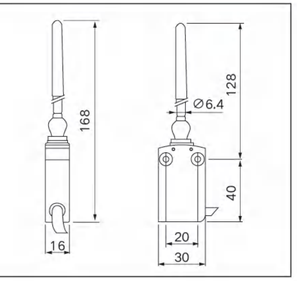
## 防水型限位开关 Waterproof limit switch


XCMD21F2L1


XCMD2102L1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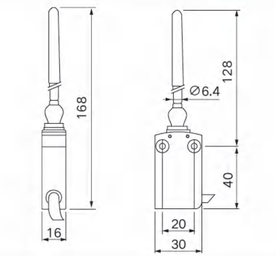


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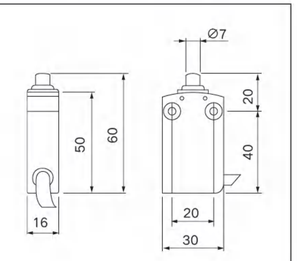
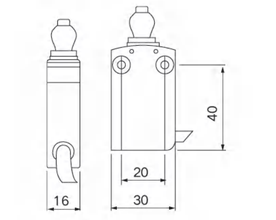
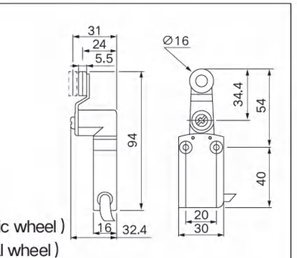


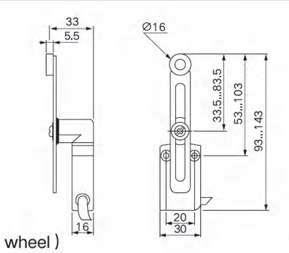

XCMD2110

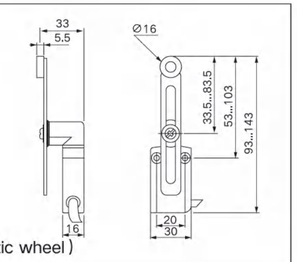

XCMD2111L1

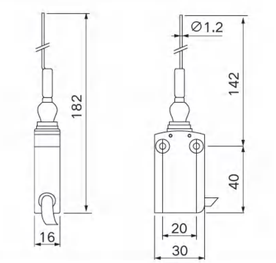

XCMD2115L1（塑料轮 Plastic wheel）
XCMD2116L1（金属轮 Metal wheel）


XCMD2145（塑料轮 Plastic wheel）


XCMD2146L1（塑料轮 Plastic wheel）


XCMD2106L1




# NLS 行程开关系列
# Travel switch series

## 型号说明 Model Description

NLS-□
□：传动轴的种类
1000：滚轴杆型
1001：推压塞杆型
1002：滚轴塞杆型
1004：滚轴臂型
1008：可调式滚轴臂型

NLS-□
□: Type of drive shaft
1000: Roller rod type
1001: Push plug rod type
1002: Roller plug rod type
1004: Roller arm type
1008: Adjustable roller arm type

## 额定值 Rated number

| 额定电压 rated voltage | 交流（VAC） | | | 直流（VDC） | | |
|---|---|---|---|---|---|---|
| | 125VAC | 250VAC | 380VAC | 24VDC | 60VDC | 220VDC |
| 非电感性负载 Non-inductive loads | 6A | 6A | 6A | 5A | 1.5A | 0.3A |
| 电感性负载 Inductive loads | 6A | 6A | 6A | 2.5A | 1.5A | 0.3A |

## 动作特性 Action Characteristics

| 型号 Models | NLS1000 | NLS1001 | NLS1002 | NLS1004 | NLS1008 |
|---|---|---|---|---|---|
| OF 最大（Max.） | 400 | 650 | 650 | 500 | 500 |
| RF 最小（Min.） | 80 | 150 | 150 | 50 | 50 |
| PT 最大（Max.） | 4mm | 2mm | 2mm | 20 ° to26 ° | 20 ° to26 ° |
| OT 最小（Min.） | 5mm | 4mm | 4mm | 30 ° | 30 ° |
| MD 最大（Max.） | 1.6mm | 1.2mm | 1.2mm | 14 ° | 14 ° |
| OP（mm） | - | 18±0.5 | 28±1 | - | - |

## 特性 CHaracteristics

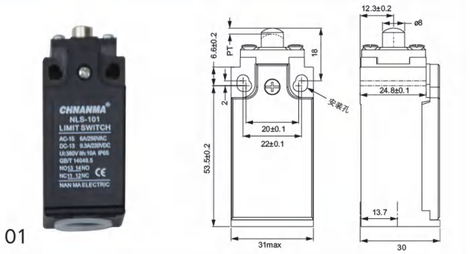
| | |
|---|---|
| 接点电阻 Contact resistance | 25MΩ |
| 绝缘电阻 electrical insulation resistance | 100MΩ 以上（500VDC） |
| 耐电压 withstand voltage | 非连续端子间 1,000VAC,50/60Hz 持续 1 分钟载电流<br>与无载电流零件间与端子和接地之间 2,500VAC，<br>50/60Hz 持续 1 分钟<br>1,000VAC, 50/60Hz for 1 minute between discontinuous terminals 2,500VAC, 50/60Hz for 1 minute between loaded and unloaded current parts and between terminals and grounding |
| 振动 vibratory | 10 至 55Hz：1.5mm |
| 冲击 under attack | 机械耐久：1,000m/Sec2（100G`S）<br>误动作耐久：300m/Sec2（30G`S）<br>Mechanical endurance: 1,000m/Sec2 (100G`S)<br>Malfunction endurance: 300m/Sec2 (30G`S) |
| 周围温度 ambient temperature | -20℃至 +65℃ |
| 湿度 humidity level | 最大 90%RH Maximum 90% RH |
| 使用寿命 service life | 机械：10,000 Mechanical: 10,000 |
| 防护等级 protection class | Max 90%RH |



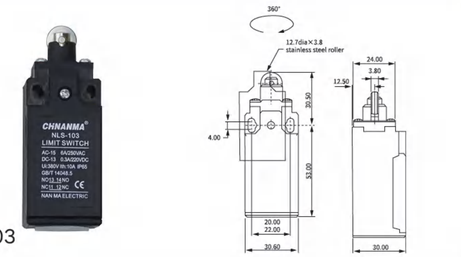


## 行程开关系列 TRAVEL SWITCH

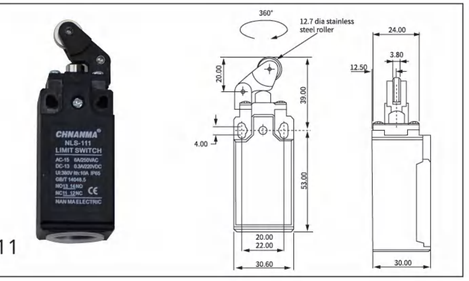
NLS-101




NLS-103




NLS-111

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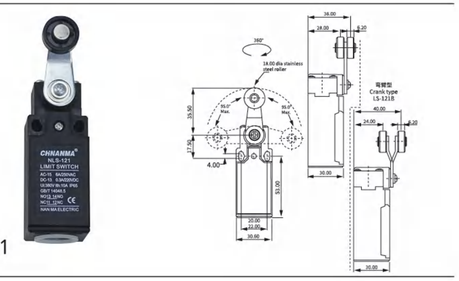


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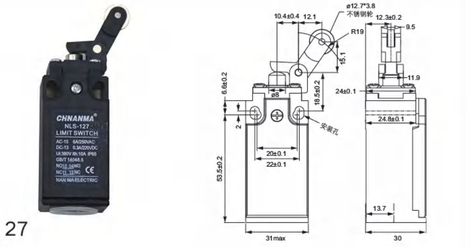
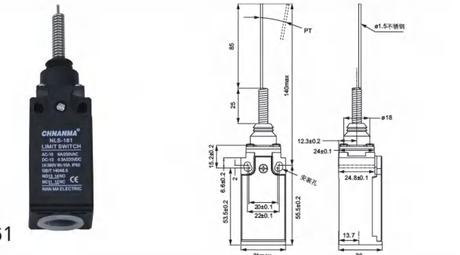
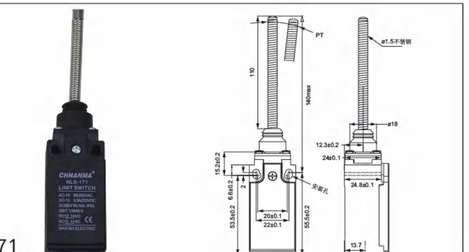



NLS-161




NLS-171

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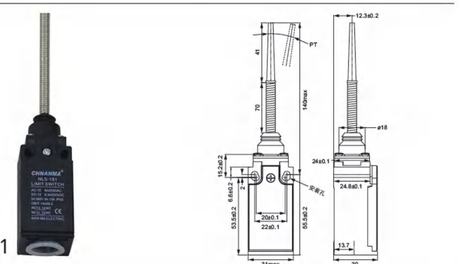
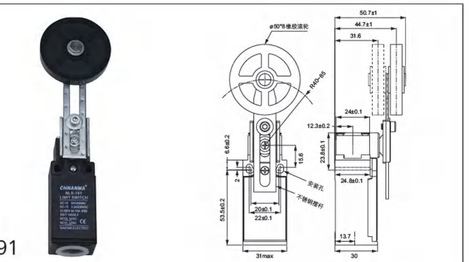
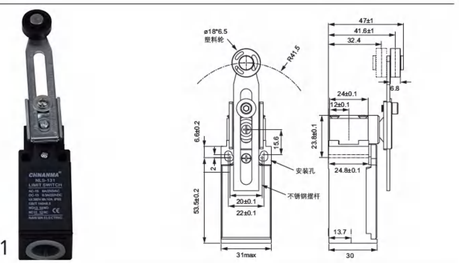



NLS-191




NLS-131



CHNANMA®



# NMGW 耐高温行程开关 +180/300/500℃
High temperature travel switch

## 特点 Features

- ◎ 双回路型限动开关
- ◎ 具有高机械强度的一体铸造铝合金外壳
- ◎ 具耐油、防水和防压结构
- ◎ 引动器种类多，方便使用
- ◎ 内藏接点座有双簧片设计，机械寿命长
- ◎ Double-circuit type of limit switch
- ◎ High mechanical strength, mainly consists of aluminum cast
- ◎ Water-proof and oil-proof construction
- ◎ Various actuators for different applications
- ◎ Built-in contact box with double spring mechanism, longer mechanical life

## 接点型式 Contact Form

常开 NO 3 — 4 常开 NO
常闭 NC 1 — 2 常闭 NC

## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 10 | | 3 | 1.5 | 10 | | 5 | 2 |
| 250VAC | 5 | | 2 | 1 | 5 | | 3 | 1 |
| 480VAC | 3 | | 1.5 | 0.8 | 3 | | 1.5 | 0.8 |
| 600VAC | 1 | | 1 | 0.5 | 1.5 | | 1 | 0.5 |
| 8VDC | 10 | | 6 | 3 | 10 | | 6 | |
| 14VDC | 10 | | 6 | 3 | 10 | | 6 | |
| 30VDC | 6 | | 4 | 3 | 6 | | 4 | |
| 125VDC | 0.8 | | 0.2 | 0.2 | 0.8 | | 0.2 | |
| 250VDC | 0.4 | | 0.1 | 0.1 | 0.4 | | 0.1 | |

注：1、电感性负载：功率因素 =0.4：时间常数 =7msec。
2、灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3、带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec.max.(DC).
2.Lamp load has an inrush current of 10 times the steady-state current,while motor load has an inrush current of 6 times the steady-state current.
3.Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 规格 Specifications

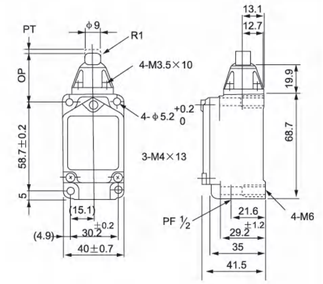
| | |
|---|---|
| 操作速度 Operation speed | 1mm 至 1m/s(CWLCA2 型 ) 1mm-1m/s |
| 动作频率 Operating frequency | 电气 :30 次 / 分 Electical: 30 operations/min |
| 接点电阻 Contact resistance | 25mΩ 以下 ( 初期 ) 25mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 ) 100mΩ min. （below 500VDC ） |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟 1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟 1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | 10 至 55Hz, 1.5mm 双振幅 10-55Hz,1.5mm double amplitude |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G ' S) 误动作耐久 :300m/Sec2( 约 30G ' S) Mechanical durable: 1, 000m/Sec2 (about 100G'S) Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambient temperature | 使用时 :-20~+80℃ ( 没有结冰 ) Using : -20~+80℃ ( With no icing ) |
| 温度选择 | +180℃ /300℃ /500℃ |
| 湿度 Humidity | 95%RH 以下 <95% RH |
| 电气寿命 Electrical life | 500,000 次以上 500,000 operations above |
| 保护构造 Degree of protection | IP66 |





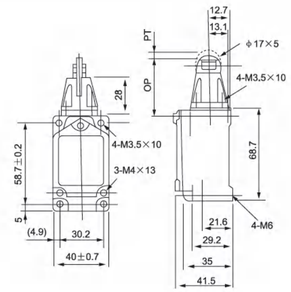
## 行程开关系列 TRAVEL SWITCH





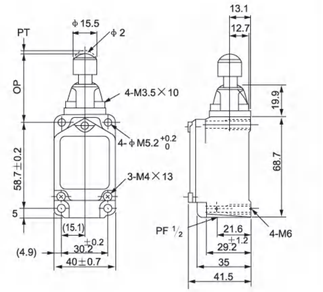
NMGW-01H





NMGW-03H





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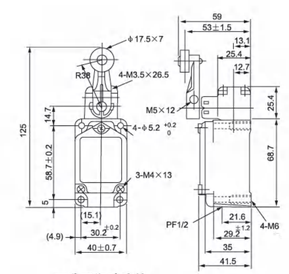
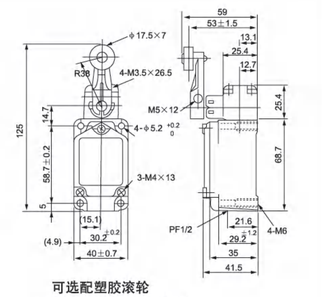


可选配塑胶滚轮
Optional plastic idler wheel

NMGW-05H

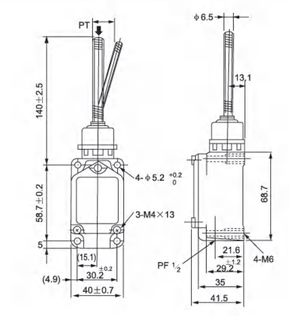




NMGW-06H

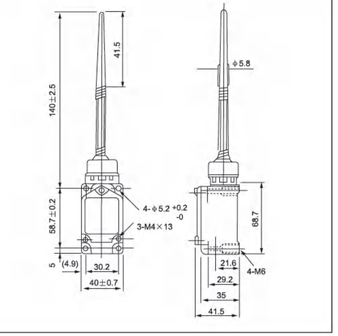
可选配塑胶滚轮
Optional plastic roller





NMGW-08H





NMGW-09H



NMGW- 陶瓷机芯 Porcelain Driving mechanism




# NM/XCK-J 行程开关 Limit Switch

## 特点 Features

◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
◎ 很适合空间比较局促，操作环境恶劣的机器。
◎ XCKJ 提供了同类产品中更可靠的操作头、快速肯定断开触头以及一个固定的插拔式主体结构。
◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
◎ It is suitable for machines with cramped space and harsh operating environment.
◎ XCKJ offers a more reliable operating head in its class, fast and sure disconnect contacts, and a fixed plug-in body structure.

## 规格 /Specification

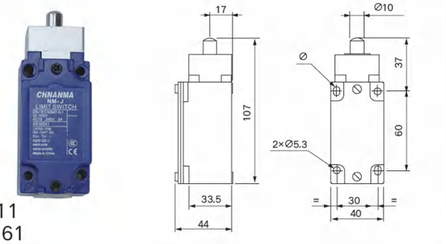
| | | |
|---|---|---|
| 型式 type | | J 经典型 J classic |
| 外壳 shell | | 金属 metal |
| 特性 peculiarity | | 固定或插入式本体低温可至 -40℃，高温可至 +120℃<br>Fixed or plug-in body can be low temperature up to -40℃, high temperature up to +120℃ |
| 多部件组合开关 Multi-component combination switch | | 操作头 + 本体 + 触点模块 Operating head + body + contact module |
| 标准符合性 Standard compliance | | EN 50041 |
| 本体尺寸 Body size(W*H*D) mm | | 40*77*44 / 42.5*84*36 |
| 操作头 Operating head | | 线性运动 ( 直动 ) 转动 ( 摇杆 ) 转动，万向<br>Linear motion (direct motion) rotation (rocker) rotation, universal |
| 触点模块 Contact module | 2 对带肯定断开功能的速动触点<br>2 pairs of quick action contacts with positive disconnect function | N/C+N/O,NC+NC |
| | 3 对带肯定断开功能的速动触点<br>3 Pairs of quick action contacts with a positive disconnect function | "N/C + N/C +N/O N/C + N/O +N/O" |
| | C/O 速动触点 C/O quick action contact | 2C/O |
| | C/O 慢动触点 C/O slow acting contact | |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | N/C +N/O 先断后合 N/O +N/C<br>N/C +N/O breaks before joining N/O +N/C |
| | | 先合后分 N/C +N/C 同步 synchronization |
| | 2 对慢动触点<br>2 pairs of slow acting contacts | N/O +N/O 同步 N/O +N/O synchronization |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | "N/C + N/C +N/O 先断后合 N/C + N/O +N/O 先断后合 "<br>"N/C + N/C +N/O Break first and then close N/C + N/O +N/O Break first and then close" |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | " 螺钉端子 2 对触点 :500V/10A 3 对触点 :400V/6A"<br>"Screw terminal 2 contacts :500V/10A 3 contacts :400V/6A" |
| 防护等级 IP/IK Protection level IP/IK | | IP 66 IK07 |
| 连接 connect | 螺钉端子 Screw terminal | 1 个 ISO M20 或 Pg 13 或 1/2" NPT 电缆进线孔 Cable inlet hole |
| | 接头 splice | 集成 M12 或 7/8"16UN Integrated M12 or 7/8"16UN |



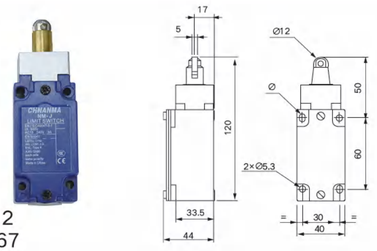


## 行程开关系列 TRAVEL SWITCH

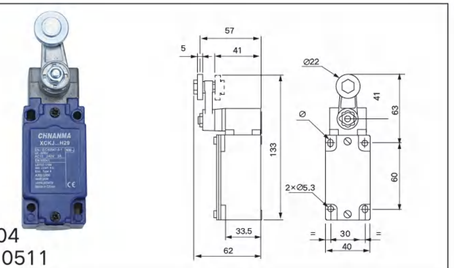
NM-J111
XCK-J161



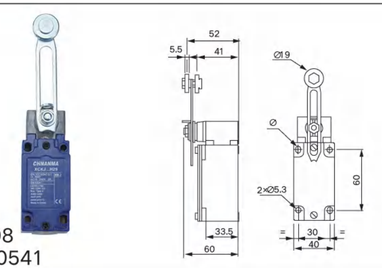

NM-J112
XCK-J167



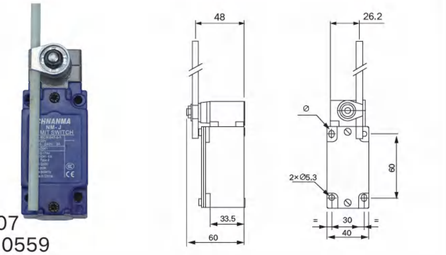

NM-J104
XCK-J10511



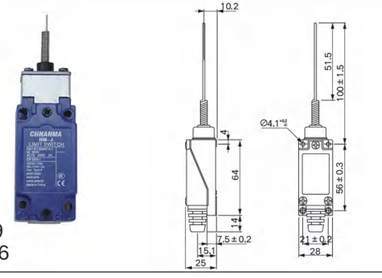

NM-J108
XCK-J10541



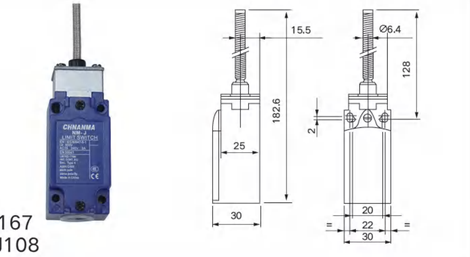

NM-J107
XCK-J10559



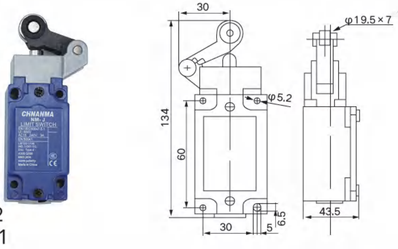

NM-J169
XCK-J106



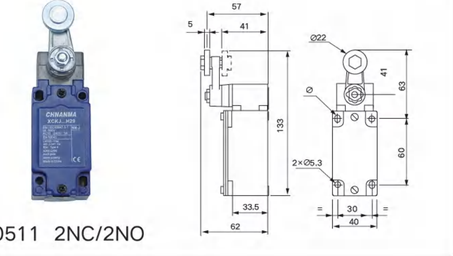

NM-J167
XCK-J108



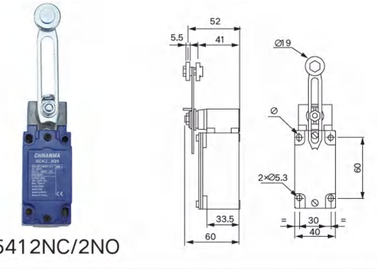

NM-J122
XCK-J121




NM-J20511 2NC/2NO




NM-J205412NC/2NO



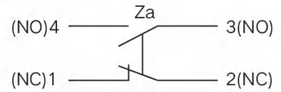



# NM-P 行程开关 Limit Switch

## 特点 Features

- ◎ 经济塑料型
- ◎ 不锈钢滚轮，冲头及弹簧
- ◎ 特大 ±95 ° 摇管摆幅
- ◎ 导管连接器尺寸标配 M20×1.5
- ◎ Economical & plastic tgpe
- ◎ Stainless steel roller, punch and spring
- ◎ Swing amplitude, extra large± 95 °
- ◎ M20x1.5 cable gland that can be equipped

## 接触形式 Contact form




## 规格 Specifications

| | |
|---|---|
| 双断开机械功用 Double Break Mechanism | INO+INC Force Break snap action 强迫断开快速机芯 |
| 额定电压 / 电流 Rated Voltage/Current | 10(4)A, 125, 250VAC/6(2)A, 380VAC Forinductance Load, Cosφ=0.4 |
| 接触电阻 Contact Resistance | 25m Ω max. (initial value) |
| 绝缘电阻 Insultation Resistance | 100m Ω min.(at 500VDC) |
| 电介强度 Dielectric Strength | 1000VAC, 50/60 Hz for 1 minute between terminals of the same polaritg |
| | 电气寿命 Electrical Life |
| | 机械寿命 Mechanical Life |
| 电气寿命 Electrical Life | 500,000 at 10A 250VAC Resistive |
| 机械寿命 Mechanical Life | 10,000,000 operations min.(under rated conditions) |
| 操作速度 Operating Speed | 5mm/s to 0.5m/s |
| 防水防尘能力 Degree of Protection | IP65 |
| 上升温度 Ambient Temperature Rised | Max 30℃ over ambient temperature at rated voltage/current |
| 合乎标准 Conformed Standards | Cenelec EN 50041, EN 50047, IEC 337-1, VDE 0660 |
| 操作温度 Operating Temperature | -5℃ ~+65℃ (with no icing) |
| 保存温度 Storage Temperature | -5℃ ~+65℃ (with no icing) |
| 湿度 Ambient Operating Humditg | 95% RH Max. |
| 冲击系数 Shock Resistance | Mechanicaldurable: 1000m/s2, min |
| | 其他螺丝扭力 Other Screw Torsional Force |
| 振动频率 Vibration Frequencg | Malfunction: 10 t0 55Hz, 1.5mm double amplitude |
| 端子螺丝扭力 Terminal Screw Torsional Force | 6-8 kgf-cm |
| 其他螺丝扭力 Other Screw Torsional Force | Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf/cm |
| 裸铜线尺寸 Bare Wire Diameter | Φ2 Max |
| 电缆尺寸 Cable Diameter | Φ12 Max |

注：带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
Note: Product with spring, its usoble ronge of operating part is within one third of the whole spring length from the front end of spring

## 动作特性 Operating Characteristics

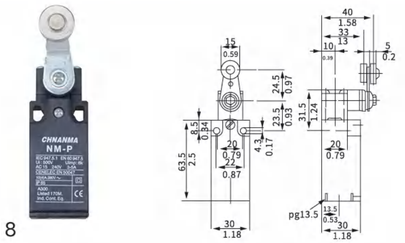
| 动作特性 Operating Characteristics | 型号 Model | 101 301 | 103 303 | 111 311 | 121 321 | 127 327 | 131 331 | 161 361 | 171 371 | 181 381 | 191 391 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF 最大 (Max) | 6.86N | 6.86N | 6.86N | 4.9N | 6.86N | 4.9N | 0.98N | 0.98N | 0.98N | 4.9N |
| 回弹力 Release force | RF 最小 (Min) | 1.96N | 1.96N | 1.96N | 0.98N | 1.96N | 0.98N | 0.392N | 0.392N | 0.392N | 0.98N |
| 前预行程 Pre-travel | PT 最大 (Max) | 1.8mm | 1.8mm | 1.8mm | 20 ° | 1.8mm | 20 ° | 30mm | 30mm | 30mm | 20 ° |
| 触发位置 Tripping position | TP±10% | 2.0mm | 2.0mm | 2.0mm | 22.5 ° | 2.0mm | 22.5 ° | 22.5 ° | 22.5 ° | 22.5 ° | 22.5 ° |
| 行程移动分辨率 Movement differential | MD 最大 (Max) | 1.2mm | 1.2mm | 1.2mm | 10 ° | 1.2mm | 10 ° | 14 ° | 14 ° | 14 ° | 10 ° |
| 触后行程 Over travel | OT 最小 (Min) | 4.0mm | 4.0mm | 4.0mm | 75 ° | 4.0mm | 75 ° | 20mm | 20mm | 20mm | 75 ° |
| 累积总行程 Total travel | TT 最小 (Min) | 5.8mm | 5.8mm | 5.8mm | 95 ° | 5.8mm | 95 ° | 50mm | 50mm | 50mm | 95 ° |
| 摇臂转换分角度 Rotarg indexing | | | | | 22.5 ° | | 22.5 ° | | | | 22.5 ° |



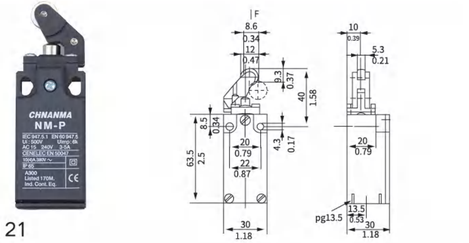


## 行程开关系列 TRAVEL SWITCH

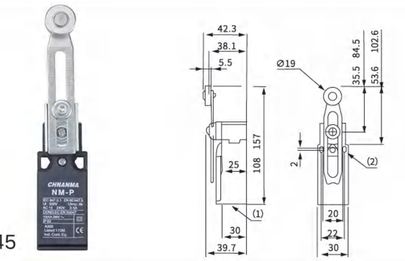
NM-P118



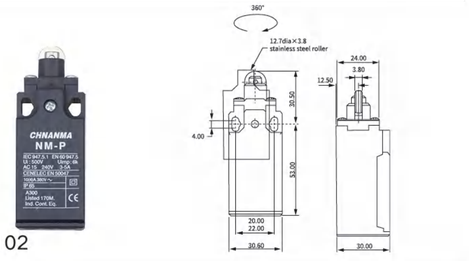
NM-P121



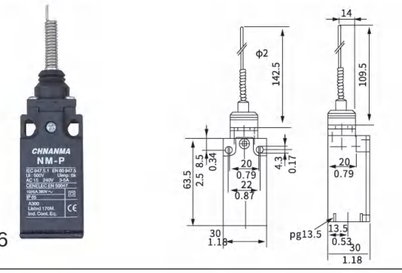
NM-P145



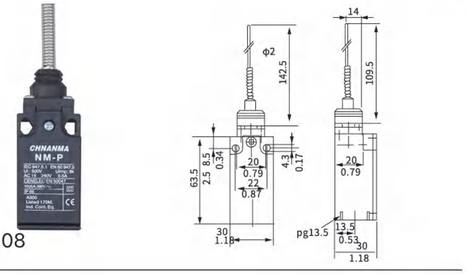
NM-P102



NM-P106



NM-P108



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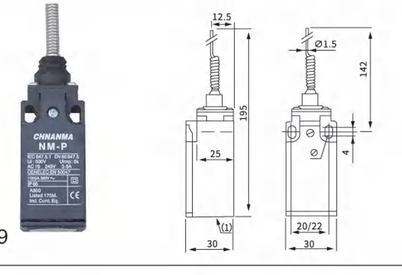

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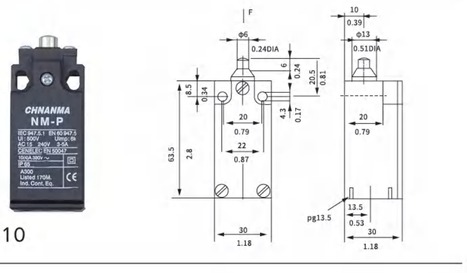
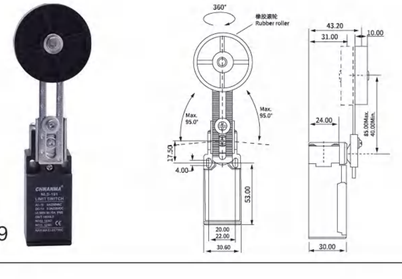


NM-P149



NM-P 机芯 Driving mechanism






# XCK-M 行程开关 Limit Switch

## 特点 Features

◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
◎ XCKM(3 个电缆接口 ) 和 XCXL(1 个电缆接口 ) 是多功能中型金属机身产品更好的理想选择。
◎ 很适合空间比较局促，操作环境恶劣的机器。
◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
◎ XCKM(3 cable interfaces) and XCXL(1 cable interface) are ideal for versatile medium metal body products.
◎ It is suitable for machines with cramped space and harsh operating environment.

## 规格 /Specification

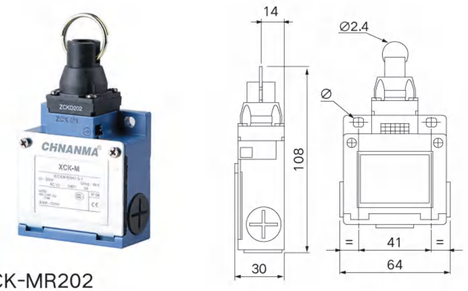
| | | |
|---|---|---|
| 型式 type | | 紧凑型优化 Compact optimization |
| 外壳 shell | | 金属 metal |
| 多部件组合开关 Multi-component combination switch | | 操作头 + 本体 + 触点模块 Operating head + body + contact module |
| 本体尺寸 Body size(W*H*D) mm | | 63*64*30 |
| 操作头 Operating head | | 线性运动 ( 直动 ) 转动 ( 摇杆 ) 转动，万向<br>Linear motion (direct motion) rotation (rocker) rotation, universal |
| 触点模块 | 2 对带肯定断开功能的速动触点<br>2 pairs of quick action contacts with positive disconnect function | N/C+N/O,NC+NC |
| | 3 对带肯定断开功能的速动触点<br>3 Pairs of quick action contacts with a positive disconnect function | "N/C + N/C +N/O N/C + N/O +N/O" |
| | C/O 速动触点 C/O quick action contact | |
| | C/O 慢动触点 C/O slow acting contact | |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | N/C +N/O 先断后合 N/O +N/C<br>N/C +N/O breaks before joining N/O +N/C |
| | | 先合后分 N/C +N/C 同步 synchronization |
| | 2 对慢动触点 2 pairs of slow acting contacts | N/O +N/O 同步 N/O +N/O synchronization |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | "N/C + N/C +N/O 先断后合 N/C + N/O +N/O 先断后合 "<br>"N/C + N/C +N/O Break first and then close N/C + N/O +N/O Break first and then close" |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | " 螺钉端子 2 对触点 :500V/10A 3 对触点 :400V/6A"<br>"Screw terminal 2 contacts :500V/10A 3 contacts :400V/6A" |
| 防护等级 IP/IK Protection level IP/IK | | IP 66 IK05 |
| 连接 connect | 螺钉端子 Screw terminal | 1 个 ISO M20 或 Pg 13 或 1/2" NPT 电缆进线孔 Cable inlet hole |



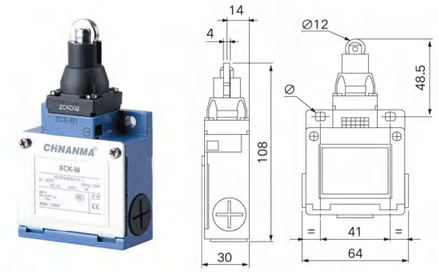


## 行程开关系列 TRAVEL SWITCH

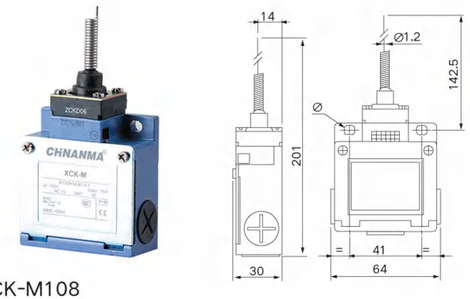
XCK-MR202




XCK-M102




XCK-M108

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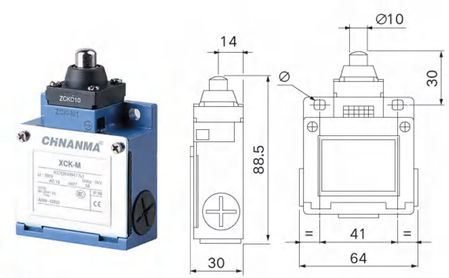


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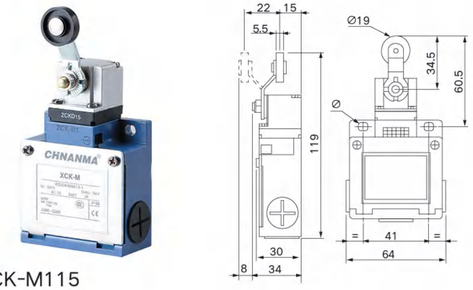


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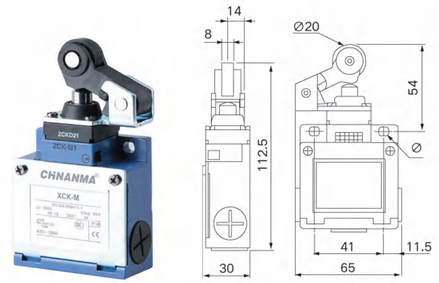


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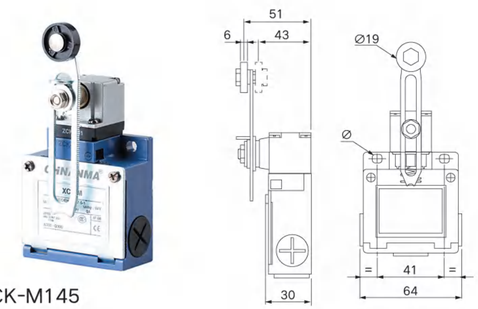


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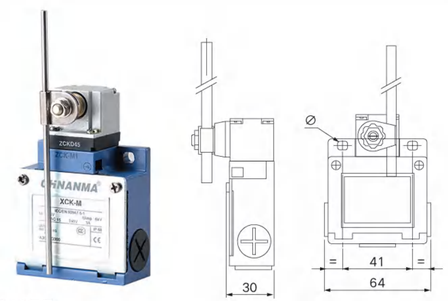





# NM-XCKN 行程开关 Limit Switch

## 特点 Features

◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
◎ XCKN 整体塑料型产品用于重复操作型机器。
出色的经典型 Telemecanique 型系列产品在全球广受欢迎
◎ 很适合空间比较局促，操作环境恶劣的机器。

◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
◎ XCKN integral plastic products are used for repetitive operation machines.
◎ The excellent Telemecanique series is popular all over the world It is suitable for machines with cramped space and harsh operating environment.

## 规格 /Specification

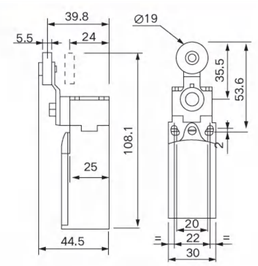
| 型号 Model number | | XCK-N |
|---|---|---|
| 型式 type | | 紧凑型优化 Compact optimization |
| 外壳 shell | | 塑料，双绝缘 Plastic, double insulated |
| 特性 peculiarity | | 本体固定 Body fixation |
| Osiconcept 模块化 modularization | | |
| CENELEC 标准符合性 Standard compliance | | EN 50047 |
| 本体尺寸 Body size(W*H*D) mm | | 31*65*30 |
| 操作头 Operating head | | 线性运动 ( 直动 ) 转动 ( 摇杆 ) 转动，万向<br>Linear motion (direct motion) rotation (rocker) rotation, universal |
| 触点模块<br>Contact module | 2 对带肯定断开功能的速动触点<br>2 pairs of quick action contacts with positive disconnect function | N/C+N/O,NC+NC |
| | 3 对带肯定断开功能的速动触点<br>3 Pairs of quick action contacts with a positive disconnect function | |
| | 4 对带肯定断开功能的速动触点<br>4 Pairs of quick action contacts with a positive disconnect function | |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | N/C+N/O,NC+NC |
| | 2 对慢动触点<br>2 pairs of slow acting contacts | |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | 螺钉端子 2 对触点 500 V/10A<br>Screw terminal 2 pairs of contacts 500 V/10A |
| 防护等级 IP/IK Protection level IP/IK | | IP 65 IK04 |
| 连接 connect | 螺钉端子 Screw terminal | 1 个 ISOM20 或 Pg11 电缆进线孔 Cable inlet hole |





## 行程开关系列 TRAVEL SWITCH

NMXCKN2118

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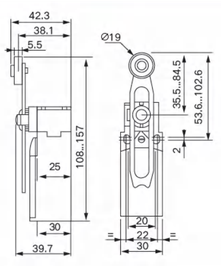


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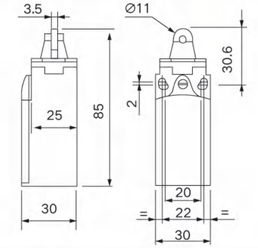


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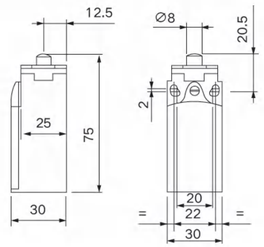


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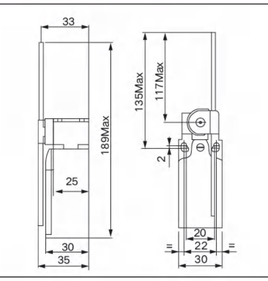


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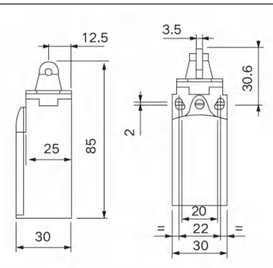


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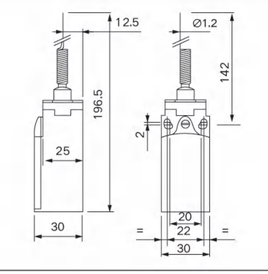


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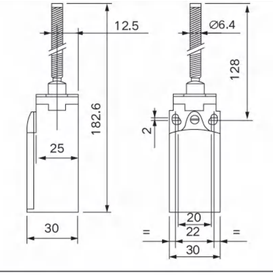


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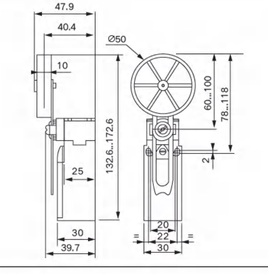


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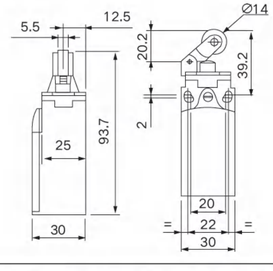


CHINANMA®



可加装编码器
Encoder can be added

# QGX 起升高度限位器
Lifting height stopper

## 型号说明 Model Number Structure

QGX - □
① ②

| 代号 Code | 说明 Description |
|---|---|
| QGX | 起升高度限位器 Lifting height stopper |
| □ | A(1:40)、B(1:80)、C(1:120) 标准传动比序号<br>Standard gear ratio serial number |

## 概述 Summary

适用于各类起重机，用于限制起升高度的先进安全保护装置。本限制器采用蜗轮蜗杆带动，凸轮触发限位开关的工作原理，具有重量轻、体积小、安装调试方便、响应灵敏准确、平稳可靠、使用寿命长等优点，一般可对上升下降和设报警限位和保护限位两道保护并能与老式电线杆结构高度限制器进行互换。

Advanced safety protection device for limiting lifting height for all types of cranes. The limiter is driven by worm gear and the working principle of cam-triggered limit switch. It has the advantages of light weight, small volume, convenient installation and debugging, sensitive and accurate response, stable and reliable, long service life, etc. Generally, it can be used to rise and fall and set alarm limit and protection limit and can be interchanged with the old pole structure height limiter.

## 产品特性 Product characteristics

范围限于控制旋转机件：起重机吊索缠索轮，卷场机，滚筒等。
类旋转机件提供一个微型调整工具可依据不同要求分别开启或闭合触点，DXZ-3G 系列配有一个使用编码器的同心轴，带有滚球轴承的镀锌涡轮带有固定在滚球轴承上的不锈钢中心轴的控制凸轮及调节螺丝带有 N16L 电缆夹的 2 个接线口

The scope is limited to control rotating machinery: crane sling winding wheel, field winder, drum, etc.
The DXZ-3G series is equipped with a concentric shaft using an encoder, a galvanized turbine with a control CAM with a stainless steel center shaft fixed to the ball bearing, and 2 terminals with a regulation screw with an N16L cable clamp

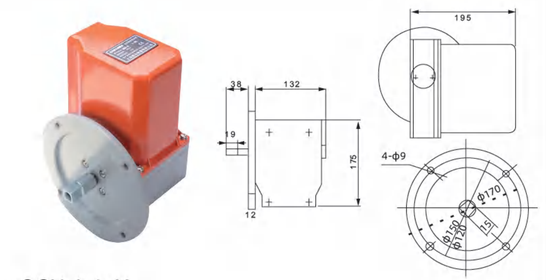
## 规格 Specifications

| | |
|---|---|
| 额定工作电压<br>Rated operating voltage | 380V |
| 额定工作电流<br>Rated working current | 10A |
| 工作范围<br>Scope of work | QGX-A 型适用于 5t~250t 起重机标准系列或非标准筒工圈数在 0~40 圈以内的起升机构上<br>QGX-A type is suitable for lifting mechanism of 5t~250t crane standard series or non-standard simple cycle number within 0~40 cycles |
| | QGX-B 型适用于 5t~250t 起重机标准系列或非标准筒工圈数在 0~80 圈以内的起升机构上<br>QGX-B type is suitable for lifting mechanism of 5t~250t crane standard series or non-standard barrel number within 0~80 turns |
| | QGX-C 型适用于 5t~250t 起重机标准系列或非标准筒工圈数在 0~120 圈以内的起升机构上<br>QGX-C type is suitable for lifting mechanism of 5t~250t crane standard series or non-standard barrel number within 0~120 turns |

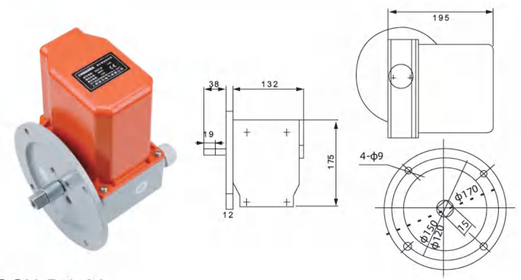




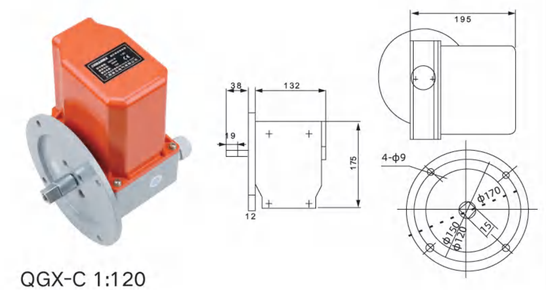
## 起升高度限位器 Lifting height stopper



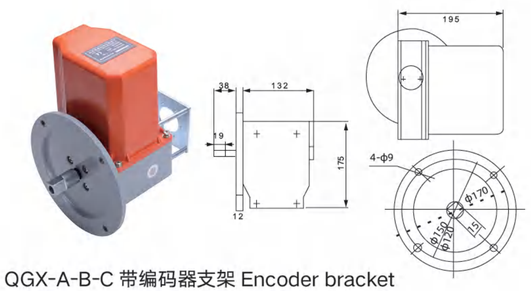

QGX-A 1:40



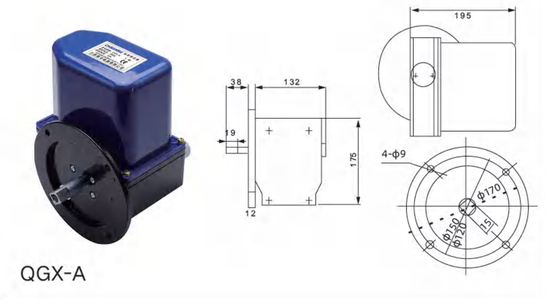

QGX-B 1:80



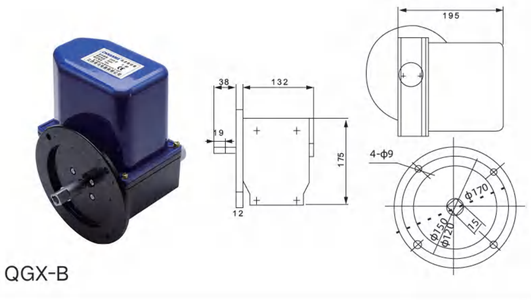

QGX-C 1:120




QGX-A-B-C 带编码器支架 Encoder bracket




QGX-A

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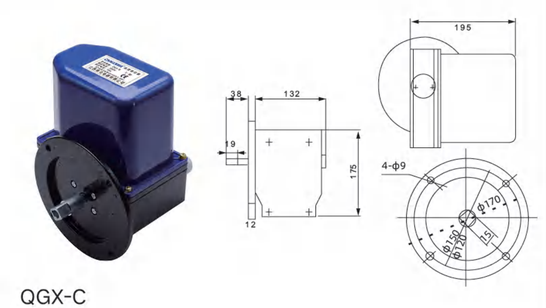
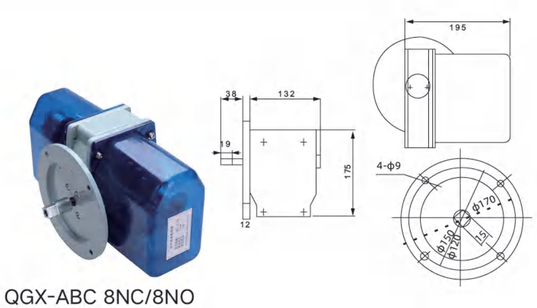



QGX-C




QGX-ABC 8NC/8NO

CHINANMA®



可加装编码器，可替代 QGX
Encoder can be added to replace QGX

# DXZ 起升高度限位器（意大利 GG 款）
Lifting height stopper (Italian GG)

## 产品特性 Product characteristics

- ◎ 认证 CE
- ◎ 1NC+1ND 切换开关
- ◎ 银合金自动清晰触点
- ◎ 额定绝缘电压为 Ui250V
- ◎ 额定发热电流为 8A
- ◎ 电阻负荷 Ie 8A-250V ac
- ◎ 电感负载 Ie 3A-250V ac
- ◎ 工作温度 -25℃ +70℃
- ◎ 防护等级：IP65
- ◎ 电器控制 4 个回路
- ◎ Certified CE
- ◎ 1NC+1ND switch
- ◎ Silver alloy automatic clear contact
- ◎ The rated insulation voltage is Ui250V
- ◎ The rated heating current is 8A
- ◎ Resistance load Ie 8A-250V ac
- ◎ Inductive load Ie 3A-250V ac
- ◎ Operating temperature -25℃ +70℃
- ◎ Protection class: IP65
- ◎ The appliance controls 4 circuits

## 产品特性 Product characteristics

范围限于控制旋转机件：起重机吊索缠索轮，卷场机，滚筒等。
类旋转机件提供一个微型调整工具可依据不同要求分别开启或闭合触点，DXZ-3G 系列配有一个使用编码器的同心轴，带有滚球轴承的镀锌涡轮带有固定在滚球轴承上的不锈钢中心轴的控制凸轮及调节螺丝带有 N16L 电缆夹的 2 个接线口

The scope is limited to control rotating machinery: crane sling winding wheel, field winder, drum, etc.
The DXZ-3G series is equipped with a concentric shaft using an encoder, a galvanized turbine with a control CAM with a stainless steel center shaft fixed to the ball bearing, and 2 terminals with a regulation screw with an N16L cable clamp

## 工作原理 Working principle

当施工升降机吊笼向上运行时，行程开关上的小滚轮处于凸凹式拉条的凹点——通电位置。当升降机出现机械故障或操作者误操作时，吊笼一直上升至极限高度，即起升高度限位器设定高度处，由于吊笼横梁牵动细钢丝绳及凸凹式拉条，同时，行程开关上的小滚轮因受外力作用上移至凸凹式拉条的凸处，小滚轮从口点通电位置移动到凸点，使行程开关断电，切断上行电源，卷扬机电动机停止运转，使吊笼停止运行。手动起升高度限位器的凸凹式拉条，使行程开关上的小滚轮从凸点复位至凹点通电位置，即可使吊笼启动。

When the construction lift cage runs upward, the small roller on the travel switch is in the concave point of the convex and concave tie - the power position. When there is a mechanical failure or operator error, the lifting cage has been rising to the limit height, that is, the lifting height limit set height, because the lifting cage beam pulls the fine wire rope and the convex and concave brace, at the same time, the small roller on the stroke switch moves to the convex and concave brace due to external force, the small roller moves from the port point power position to the convex point, so that the stroke switch is powered off. Cut off the upstream power supply, the motor of the hoist stops running, and the lifting cage stops running. By manually lifting the convex and concave brace of the height limit, the small roller on the travel switch is reset from the convex point to the power position of the concave point, and the lifting cage can be started.

## 标准传动比序号表 Standard Drive Ratio

| 序号比 Ordinal ratio | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 传动比 Gear ratio | 1:17 | 1:20 | 1:25 | 1 :30 | 1:33 | 1:50 | 1:80 | 1:100 | 1:150 | 1:200 |

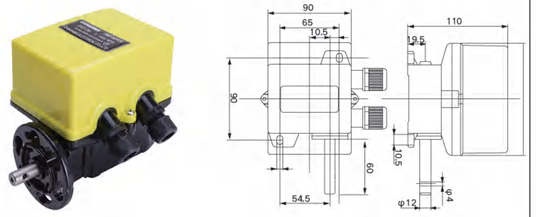
## 非标准传动比 Non Standard Transmission Ratio

| 传动比 Gear ratio | 1:20 | 1:26 | 1:30 | 1:35 | 1:87 | 1:105 | 1:135 | 1:140 |
|---|---|---|---|---|---|---|---|---|
| | 1:160 | 1:188 | 1:247 | 1:330 | 1:360 | 1:453 | 1:480 | 1:660 |

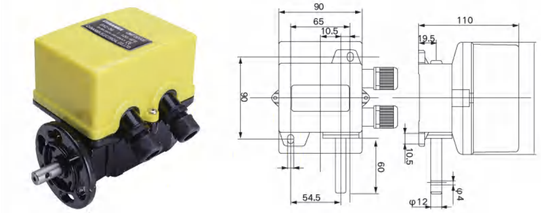




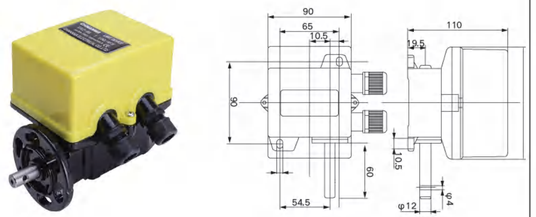
## 起升高度限位器 Lifting height stopper




DXZ-3G 1:17




DXZ-3G 1:20

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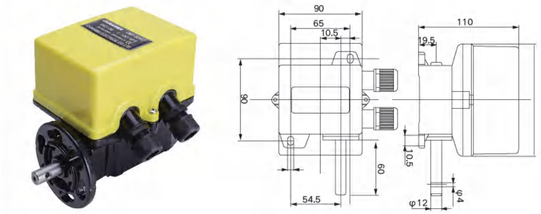


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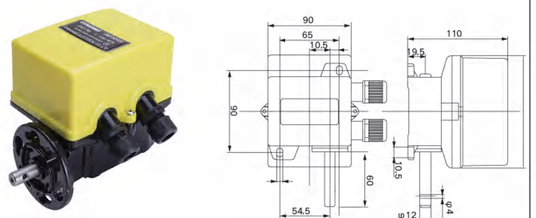


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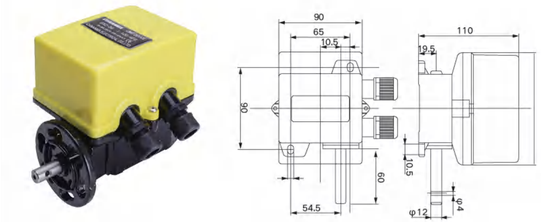
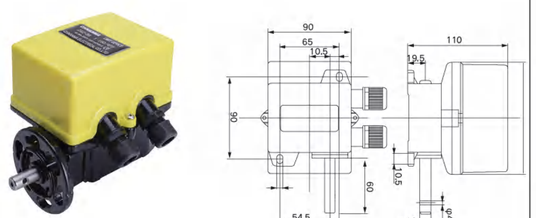
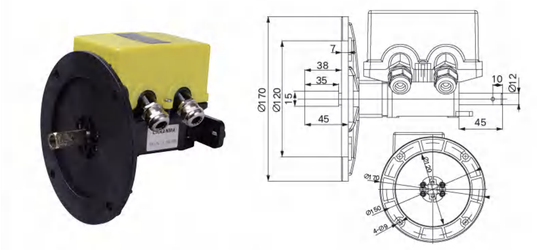



DXZ-3G 1:150




DXZ-3G 6/F 6NC/6NO




DXZ-3G/F 大法兰 Grand Flange

CHINANMA®



可替代意大利 GG 款
Can replace Italian GG model

# DXZ-6N 起升高度限位器
Lifting height stopper

## 产品特性 Product characteristics

- ◎ 认证 CE
- ◎ 1NC+1ND 切换开关
- ◎ 银合金自动清晰触点
- ◎ 额定绝缘电压为 Ui250V
- ◎ 额定发热电流为 8A
- ◎ 电阻负荷 Ie 8A-250V ac
- ◎ 电感负载 Ie 3A-250V ac
- ◎ 工作温度 -25℃ +70℃
- ◎ 防护等级：IP65
- ◎ 电器控制 4 个回路

- ◎ Certified CE
- ◎ 1NC+1ND switch
- ◎ Silver alloy automatic clear contact
- ◎ The rated insulation voltage is Ui250V
- ◎ The rated heating current is 8A
- ◎ Resistance load Ie 8A-250V ac
- ◎ Inductive load Ie 3A-250V ac
- ◎ Operating temperature -25℃ +70℃
- ◎ Protection class: IP65
- ◎ The appliance controls 4 circuits

## 产品概述 Product overview

多功能转角式限位器 DXZ-6N 系引进国外最新技术的基础上，自主研发的一款新型限位器。产品质量稳定，深受广大客户的信赖 DXZ-6N 限位器广泛适用于塔机起重机、港机、舞台设备，船舶设备，传动机械的控制和限位。具有体积小、性能优、灵敏度高，狭小空间调整方便等特点。

DXZ-6N is a new type of multi-function corner stop based on the introduction of the latest foreign technology. Product quality is stable, deeply trusted by the majority of customers DXZ-6N stopper widely used in tower crane, port machinery, stage equipment, Marine equipment, transmission machinery control and limit. It has the characteristics of small volume, excellent performance, high sensitivity and convenient adjustment in narrow space.

## 工作原理 Working principle

当施工升降机吊笼向上运行时，行程开关上的小滚轮处于凸凹式拉条的凹点——通电位置。当升降机出现机械故障或操作者误操作时，吊笼一直上升至极限高度，即起升高度限位器设定高度处，由于吊笼横梁牵动细钢丝绳及凸凹式拉条，同时，行程开关上的小滚轮因受外力作用上移至凸凹式拉条的凸处，小滚轮从口点通电位置移动到凸点，使行程开关断电，切断上行电源，卷扬机电动机停止运转，使吊笼停止运行。手动起升高度限位器的凸凹式拉条，使行程开关上的小滚轮从凸点复位至凹点通电位置，即可使吊笼启动。

When the construction lift cage runs upward, the small roller on the travel switch is in the concave point of the convex and concave tie - the power position. When there is a mechanical failure or operator error, the lifting cage has been rising to the limit height, that is, the lifting height limit set height, because the lifting cage beam pulls the fine wire rope and the convex and concave brace, at the same time, the small roller on the stroke switch moves to the convex and concave brace due to external force, the small roller moves from the port point power position to the convex point, so that the stroke switch is powered off. Cut off the upstream power supply, the motor of the hoist stops running, and the lifting cage stops running. By manually lifting the convex and concave brace of the height limit, the small roller on the travel switch is reset from the convex point to the power position of the concave point, and the lifting cage can be started.

## 标准传动比序号表 Standard Drive Ratio

| 序号比 Ordinal ratio | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 传动比 Gear ratio | 1:8 | 1:10 | 1:15 | 1 :20 | 1:25 | 1:30 | 1:50 |

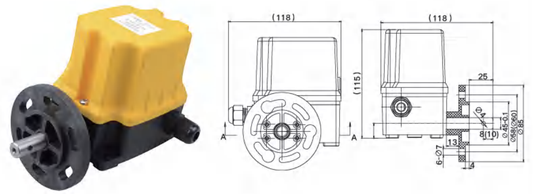
## 非标准传动比 Non Standard Transmission Ratio

| 传动比 Gear ratio | 1:20 | 1:26 | 1:30 | 1:35 | 1:87 | 1:105 | 1:135 | 1:150 |
|---|---|---|---|---|---|---|---|---|
| | 1:160 | 1:188 | 1:247 | 1:330 | 1:360 | 1:453 | 1 : 480 | 1:660 |

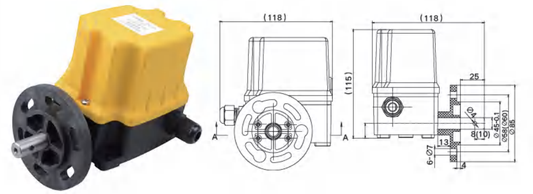




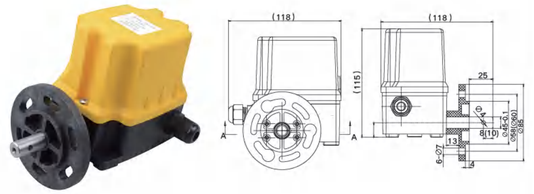
## 起升高度限位器 Lifting height stopper



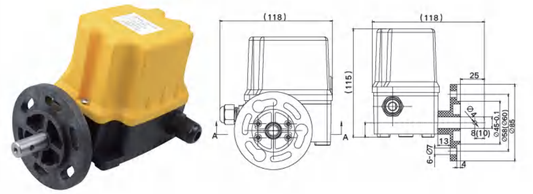
DXZ-6N 1:15



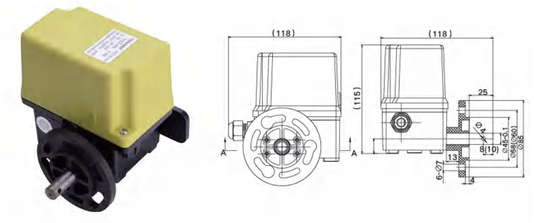
DXZ-6N 1:25



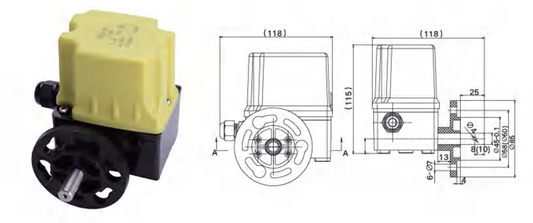
DXZ-6N 1:30



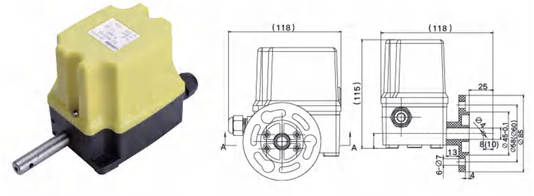
DXZ-6N 1:50



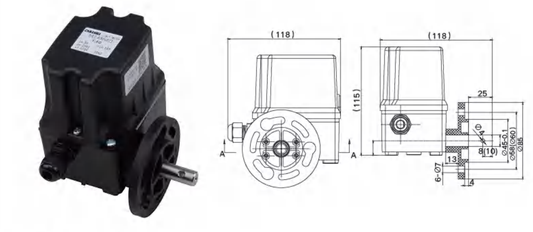
DXZ-6N



DXZ-6N 传动轴横置 Drive shaft transverse

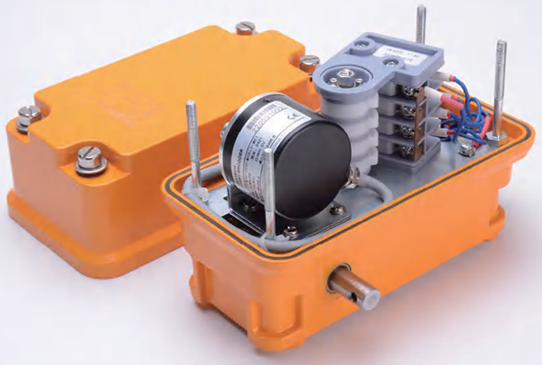


DXZ-6N 传动轴竖置 The drive shaft is erected



DXZ-6N-G01

CHNANMA®



高精度带编码器
High precision tape encoder

# NMDXZ 起升高度限位器 Lifting height stopper

## 概述 Summary

本产品可广泛应用于建筑、港口、矿山等行业的起重、传输机械的之余间三座标的控制和限位。具有体积小、功能多、精度高、限位可调、通用性强及维护安装和使用调整方便等优点。限位器采用可调试机械记忆结构，具有性能可靠、灵敏高度等特点。

This product can be widely used in construction, port, mining and other industries of lifting, transmission machinery in the rest of the three coordinate control and limit. It has the advantages of small volume, multiple functions, high precision, adjustable limit, strong versatility, easy maintenance, installation and use adjustment. The stopper adopts the structure of adjustable mechanical memory and has the characteristics of reliable performance, high sensitivity and so on.

## 型号及含义 Model And Meaning

NM DXZ - 1 □□□

- W 电位器 B 编码器 W Potentiometer B encoder
- 标准传动比 Standard gear ratio
- 标准控制回路 Standard control loop
- 限位开关 Limit switch
- 南马 Nanma

## 技术参数 Technical Parameter

| | | | |
|---|---|---|---|
| 工作环境 Working environment | -20 +80 度 | 电压 Voltage | 380V |
| 相对湿度 Relative humidity | ≤ 90% | 额定电流 Rated current | 6A |
| 海拔高度 Altitude | ≤ 2500m | 控制回路 Control loop | 4 回路 -loop |

## 标准传动比序号表 Standard Drive Ratio

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 序号比 Ordinal ratio | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 传动比 Gear ratio | 1:13 | 1:17 | 1:46 | 1 :60 | 1:78 | 1:210 | 1:274 | 1:960 |

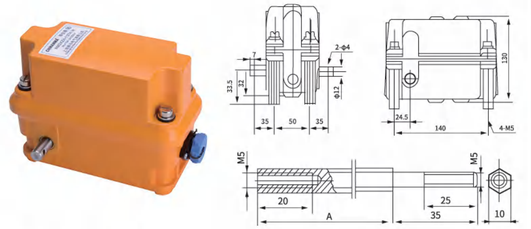
## 非标准传动比 Non Standard Transmission Ratio

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 传动比 Gear ratio | 1:20 | 1:26 | 1:30 | 1:35 | 1:87 | 1:105 | 1:135 | 1:140 |
| | 1:160 | 1:188 | 1:247 | 1:330 | 1:360 | 1:453 | 1:480 | 1:660 |

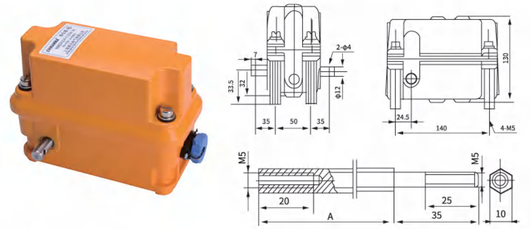




## 起升高度限位器 Lifting height stopper



NMDXZ 1:13



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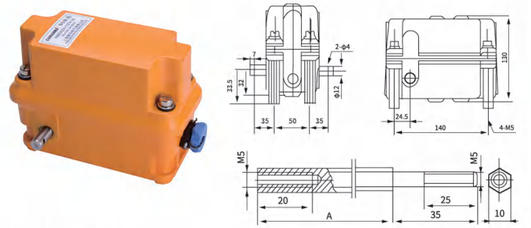

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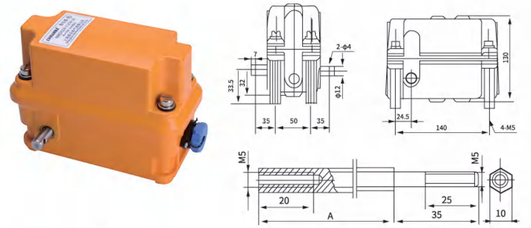

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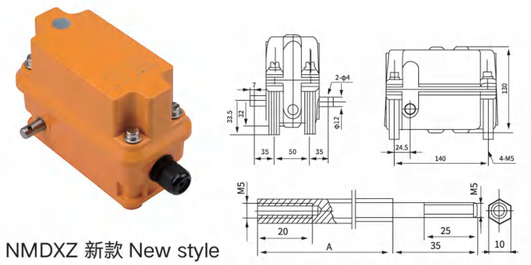
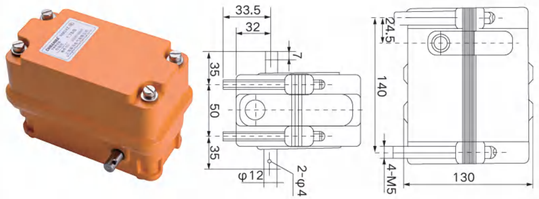
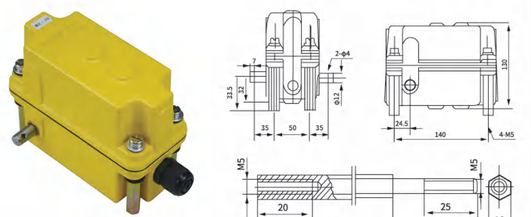


NMDXZ 新款 New style



NMDXZ 新款带编码器 New tape encoder



DXZ 老款 Old model



十字联轴器
Cross coupling



十字联轴器
Cross coupling



万向节
Cardan joint

DXZ 联轴器 coupling



# FCR/NKL/DXZ 十字限位开关 Cross limit switch

## 产品说明 Product description

DXZ(FCR)001、DXZ(FCR)006，带有 3-5 个闷门的 300mm 推杆的旋转控制开关，带有 12 到 200 转数 / 分钟的有 4 或者 6 个微型开关的旋转齿轮的控制开关。可分为正反 90 度旋转与正反 180 度旋转开关触点采用 AgCdo 材料，触电容量大，使用寿命长。结构件为 PA66 工程塑料阻燃材料。适用于起重机、行车、矿山机械，吊车等领域。

DXZ(FCR)001, DXZ(FCR)006, rotary control switches with 300mm push rods with 3 to 5 closed doors, control switches with rotary gears with 4 or 6 micro switches at 12 to 200 RPM. It can be divided into positive and negative 90 degree rotation and positive and 180 degree rotation switch contacts using AgCdo material, large electric shock capacity, long service life. The structural parts are PA66 engineering plastic flame retardant materials. Suitable for crane, crane, mining machinery, crane and other fields.

## 特点 Features

◎ 额定电压：最高 690V
◎ 额定电流：16A
◎ 防护等级：IP65
◎ 温度环境：-25~+70(℃)

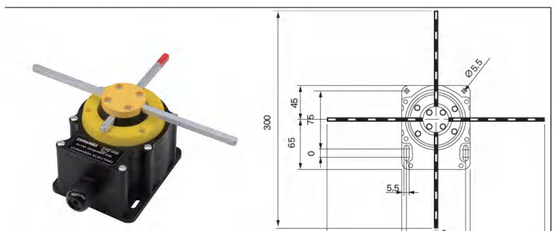
◎ Rated voltage: up to 690V
◎ Rated current: 16A
◎ Protection class: IP65
◎ Temperature environment: -25~+70(℃)

## 结构形式 Structural form

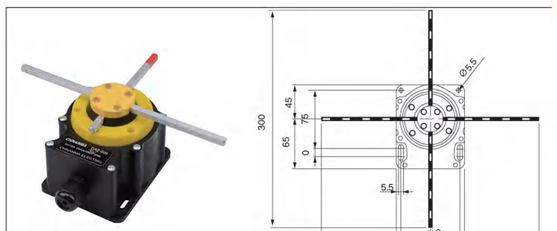
| 描述Description | 参考号 Reference number | 电路图编号 Circuit diagram number | 电路图1 Circuit diagram1 带有机械联锁 With mechanical interlock | | | 电路图2 Circuit diagram2 带有机械联锁 With mechanical interlock | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 带有机械联锁阀位 适用于单速驱动控制 With mechanical interlocking valve position Suitable for single speed drive control | DXZ(FCR)001 | 1 | 1 2 | 1 2 | 1 2 | 5 1 6 2 | 5 1 6 2 | 5 1 6 2 | 5 1 6 2 | 5 1 6 2 |
| | | | 3 4 | 3 4 | 3 4 | 7 3 8 4 | 7 3 8 4 | 7 3 8 4 | 7 3 8 4 | 7 3 8 4 |
| | | | -90° | 0° | +90° | -180° | -90° | 0° | +90° | +180° |
| 带有机械联锁4阀位 适用于双速驱动控制 4 valve positions with mechanical interlocking Suitable for two-speed drive control | DXZ(FCR)006 | 2 | | | | | | | | |
| | NKL-001 | | | | | | | | | |
| | NKL-006 | | | | | | | | | |

单速001 Single speed 001　　双速006 Two-speed 006

## 十字开关 Cross switch



DXZ-001



DXZ-006



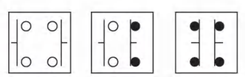
# NMR(SC-1) 主令开关 Master switch



## 特点 Features

◎ 上、下、左、右四方向操作顺畅，具可任意选择一向、二向、三向、或四向
◎ 有保持、复位、无动作等三种操作方式
◎ 接点座有 2a(BR-1),1a1b(BR-2),2b(BE-3)。如下图可自由选择方向与接点之组合
◎ 具耐油、防水和防压结构

◎Smoothly and swiftly handle the lever in four directions upward, rightward, downward, and leftward
◎Three alternatives of movement are attainable in each direction: Go-on, auto-return, and blockade-enforcing
◎Operate in four, three, or two directions with the switch
◎Rubber bushing is water-proof, oil-resistant, and dustpreventive



BR-1　BR-2　BR-3

## 型号说明 Model Number Structure

CSK - 30 2 - 2 2 2 2 10 10 10 10
① ② ③ ④ ⑤

| 项目 Items | 代号 Code | 说明 Description |
|---|---|---|
| ①型式 Type | NMR | 圆型 Round type |
| | NMS | 方型 Square type |
| | NMRS | 圆型 Round type |
| | NMRN | 密封圆型 Seal Round |
| ②固定孔径 Mounting Hole | 30 | φ30m/m only |
| ③接点座数目 No.of contact Blocks fitted | 1~4 | 1~4 |

| 项目 Items | 代号 Code | 说明 Description |
|---|---|---|
| ④操作方式 Actuating keys | 1 | 保持 Go-on |
| | 2 | 复位 Auto-return |
| | 0 | 无动作 Blockade-enforcing |
| ⑤接点排列型式 Type of contact Blocks fitted | 00 | None |
| | 10 | 1a(1NO) |
| | 20 | 2a(2NO) |
| | 01 | 1b(1NC) |
| | 02 | 2b(2NC) |
| | 11 | 1a1b(1NO-1NC) |

Note: When you place order, please kindly designate clockwise the movement way and type of contact fitted.

## 额定值 Ratings

| | | | | | |
|---|---|---|---|---|---|
| 交流 AC | 额定电压 Rated voltage | | 110V | 220V | 440V |
| | 额定电流 Rated current | | 10A | 6A | 3A |
| | 开断电流 Breaking current capacity | | 50A | 30A | 10A |
| 直流 DC | 电阻性负载 Resistance Load | 额定电压 Rated voltage | 110V | 220V | 600V |
| | | 额定电流 Rated Current | 2.2A | 1.1A | 0.4A |
| | | 开断电流 Breaking Current | 2.42A | 1.21A | 0.44A |
| | 电感性负载 Inductive Load | 额定电流 Rated Current | 1.2A | 0.45A | 0.2A |
| | | 开断电流 Breaking Current | 1.32A | 0.5A | 0.22A |




# XCKMR/VR 十字限位开关 Cross Limit Switch

## 特点 Features

◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
◎ 很适合空间比较局促，操作环境恶劣的机器。
◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
◎ It is suitable for machines with cramped space and harsh operating environment.

## 产品说明 Product description

十字限位开关是用以限定机械设备的运动 K 限位置的电气开关。可以安装在相对静止的物体上或者运动的物体上。当动物接近静物时，开关的连杆驱动开关的接点引起闭合的接点分断或者断开的接点闭合。由开关接点开、合状态的改变去控制电路和机构的动作。

The cross limit switch is an electrical switch used to limit the motion K limit position of mechanical equipment. It can be installed on a relatively stationary object or on a moving object. When the animal approaches the still life, the connecting rod of the switch drives the switch contact, causing the closed contact to break or the open contact to close. The action of the circuit and mechanism is controlled by the change of the open and close state of the switch contact.

## 规格 /Specification

| 型号 Model number | | XCK，XCK MR，XCK VR |
|---|---|---|
| 型式 type | | 应用型 : 起重设备及装卸设备等恶劣应用场合<br>Applications: harsh applications such as lifting equipment and handling equipment |
| 外壳 shell | | 金属或聚酯 Metal or polyester |
| 模块化 modularization | | 头部，本体和连接部件的模块化 Modularization of the head, body and connecting parts |
| 本体尺寸 Body size(W*H*D) mm | | 取决于型号 Depends on model |
| 操作头 Operating head | | 线性运动 ( 直动 )；转动 ( 摇杆 )Linear motion (direct motion); turn |
| 触点模块<br>Contact module | 2 对带肯定断开功能的速动触点<br>2 pairs of quick action contacts with positive disconnect function | 取决于型号 Depends on model |
| | 3 对带肯定断开功能的速动触点<br>3 Pairs of quick action contacts with a positive disconnect function | |
| | C/O 速动触点 C/O quick action contact | 取决于型号 Depends on model |
| | C/O 慢动触点 C/O slow acting contact | 取决于型号 Depends on model |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | 取决于型号 Depends on model |
| | 2 对慢动触点 2 pairs of slow acting contacts | |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | 螺钉端子 2 对触点 ,500V/10A Screw terminal 2 pairs of contacts,500V/10A |
| 防护等级 IP/IK<br>Protection level IP/IK | | 根据型号不同 :IP66 IK05，IP65 IK05 或 IP54 IK05<br>Depending on the model :IP66 IK05, IP65 IK05 or IP54 IK05 |
| 连接 connect | 螺钉端子 ( 电缆密封管进线孔 )Screw terminal | 根据型号不同 :1 个或 3 个 ISO M20 或 Pg13 电缆进线孔<br>Depending on the model :1 or 3 ISO M20 or Pg13 cable entry holes |

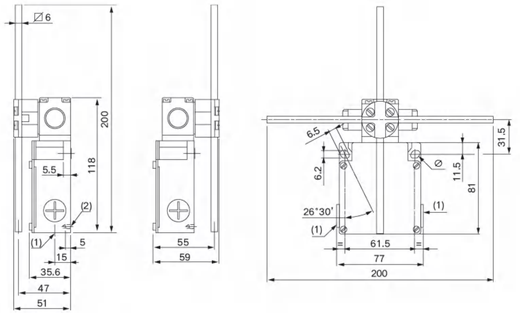




## 十字限位开关 Cross Limit Switch

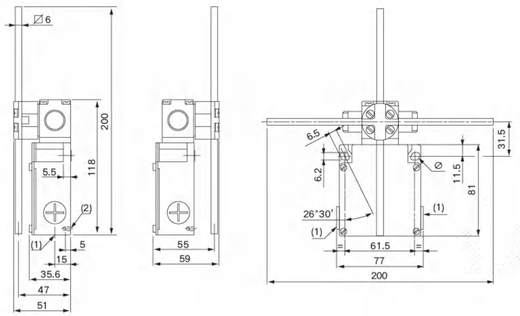


XCKMR44D1H29 ( 塑料 plastic )



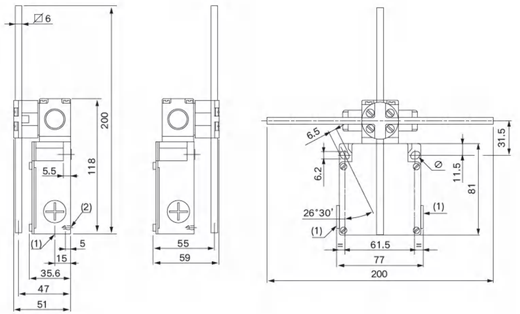



XCKVR54D1H29 ( 塑料 plastic )






XCKVR44D1H29 ( 金属 metal )



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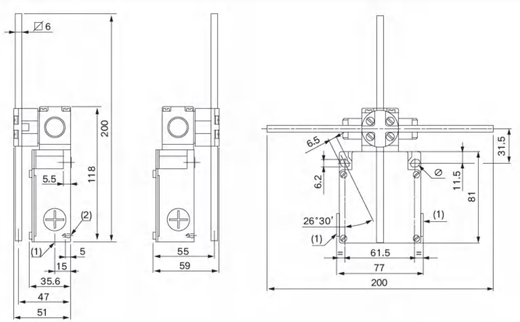





# XCR 十字限位开关 Cross Limit Switch

## 特点 Features

◎ 欧洲标准产品 (EN50047) 带有肯定断开触头，甚至还有可以用于安全领域的快速操作型产品。
◎ 很适合空间比较局促，操作环境恶劣的机器。

◎ The European standard product (EN50047) comes with a sure break contact, and there are even fast operating products that can be used in the field of safety.
◎ It is suitable for machines with cramped space and harsh operating environment.

## 产品说明 Product description

十字限位开关是用以限定机械设备的运动 K 限位置的电气开关。可以安装在相对静止的物体上或者运动的物体上。当动物接近静物时，开关的连杆驱动开关的接点引起闭合的接点分断或者断开的接点闭合。由开关接点开、合状态的改变去控制电路和机构的动作。

The cross limit switch is an electrical switch used to limit the motion K limit position of mechanical equipment. It can be installed on a relatively stationary object or on a moving object. When the animal approaches the still life, the connecting rod of the switch drives the switch contact, causing the closed contact to break or the open contact to close. The action of the circuit and mechanism is controlled by the change of the open and close state of the switch contact.

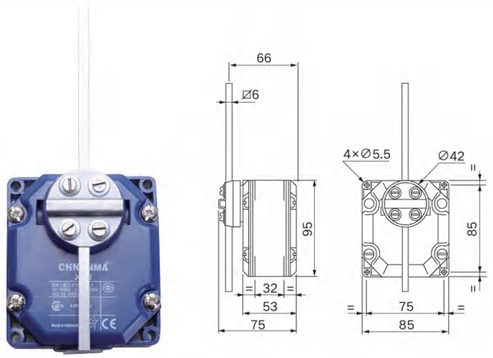
## 规格 /Specification

| 型号 Model number | | XCR，XCK MR，XCK VR |
|---|---|---|
| 型式 type | | 应用型：起重设备及装卸设备等恶劣应用场合<br>Applications: harsh applications such as lifting equipment and handling equipment |
| 外壳 shell | | 金属或聚酯 Metal or polyester |
| 模块化 modularization | | 头部，本体和连接部件的模块化 Modularization of the head, body and connecting parts |
| 本体尺寸 Body size(W*H*D) mm | | 取决于型号 Depends on model |
| 操作头 Operating head | | 线性运动 ( 直动 )；转动 ( 摇杆 )Linear motion (direct motion); turn |
| 触点模块<br>Contact module | 2 对带肯定断开功能的速动触点<br>2 pairs of quick action contacts with positive disconnect function | 取决于型号 Depends on model |
| | 3 对带肯定断开功能的速动触点<br>3 Pairs of quick action contacts with a positive disconnect function | |
| | C/O 速动触点 C/O quick action contact | 取决于型号 Depends on model |
| | C/O 慢动触点 C/O slow acting contact | 取决于型号 Depends on model |
| | 2 对带肯定断开功能的慢动触点<br>2 pairs of slow moving contacts with a positive disconnect function | 取决于型号 Depends on model |
| | 2 对慢动触点 2 pairs of slow acting contacts | |
| | 3 对带肯定断开功能的慢动触点<br>3 Pairs of slow moving contacts with a positive disconnect function | |
| 绝缘电压 (Ui)/ 发热电流 (Ithe)<br>Insulation voltage (Ui)/ Heating current (Ithe) | | 螺钉端子 2 对触点 ,500V/10A Screw terminal 2 pairs of contacts,500V/10A |
| 防护等级 IP/IK<br>Protection level IP/IK | | 根据型号不同 :IP66 IK05，IP65 IK05 或 IP54 IK05<br>Depending on the model :IP66 IK05, IP65 IK05 or IP54 IK05 |
| 连接 connect | 螺钉端子 ( 电缆密封管进线孔 )Screw terminal | 根据型号不同 :1 个或 3 个 ISO M20 或 Pg13 电缆进线孔<br>Depending on the model :1 or 3 ISO M20 or Pg13 cable entry holes |

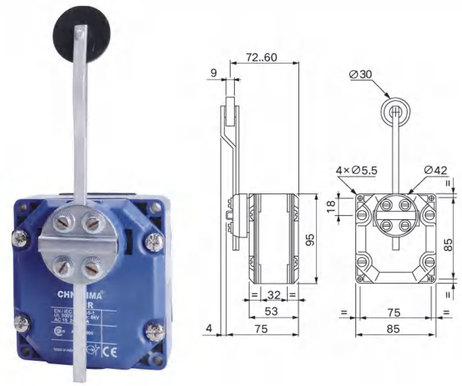




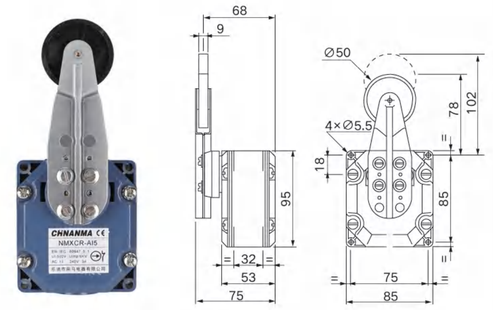
## 十字限位开关系列 Cross Limit Switch



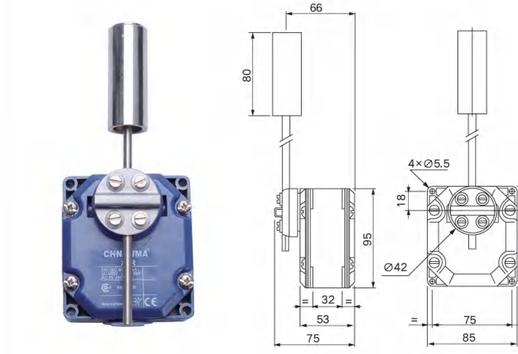

XCR-A11



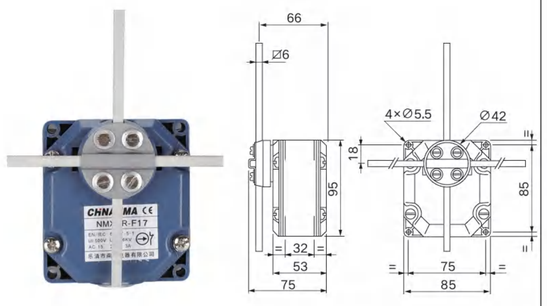

XCR-A12




XCR-A15




XCR-T115

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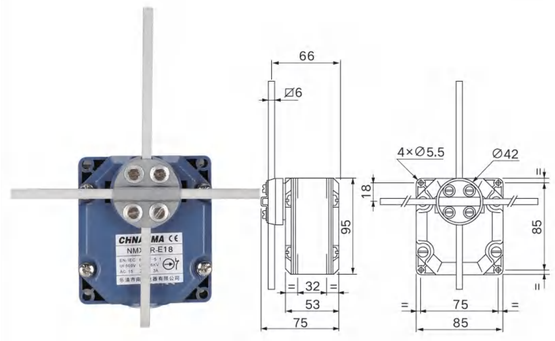



XCR-E18

CHNANMA®

# NMLX 小型起升高度限位器
Small lift height stopper



机械限位及电位器可选
Mechanical limit and potentiometer are optional

## 概述 Summary

本产品可广泛应用于建筑、港口、矿山等行业的起重、传输机械的之余间三座标的控制和限位。具有体积小、功能多、精度高、限位可调、通用性强及维护安装和使用调整方便等优点。限位器采用可调试机械记忆结构，具有性能可靠、灵敏高度等特点。

This product can be widely used in construction, port, mining and other industries of lifting, transmission machinery in the rest of the three coordinate control and limit. It has the advantages of small volume, multiple functions, high precision, adjustable limit, strong versatility, easy maintenance, installation and use adjustment. The stopper adopts the structure of adjustable mechanical memory and has the characteristics of reliable performance, high sensitivity and so on.

## 型号及含义 Model And Meaning

NM LX - 1 □□

- 标准传动比 Standard gear ratio
- 标准控制回路 Standard control loop
- 限位开关 Limit switch
- 南马 Nanma

## 技术参数 Technical Parameter

| | | | |
|---|---|---|---|
| 工作环境 Working environment | -20+45 度 | 电压 voltage | 380V |
| 相对湿度 Relative humidity | ⩽ 90% | 额定电流 Rated current | 6A |
| 海拔高度 Altitude | ⩽ 2500m | 控制回路 ontrol loop | 2 回路 2-loop |

## 标准传动比序号表 Standard Drive Ratio

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 序号比 Ordinal ratio | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 传动比 Gear ratio | 16 | 24 | 48 | 65 | 91 | 130 | 195 | 240 | 325 | 528 | 715 |

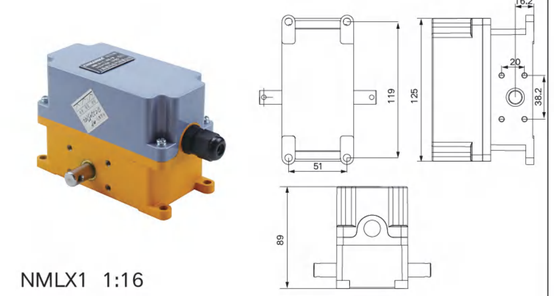
## 非标准传动比 Non Standard Transmission Ratio

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 传动比 Gear ratio | 1:20 | 1:26 | 1:30 | 1:35 | 1:87 | 1:105 | 1:135 | 1:140 |
| | 1:160 | 1:188 | 1:247 | 1:330 | 1:360 | 1:453 | 1:480 | 1:660 |





## 起升高度限位器 Lifting height stopper



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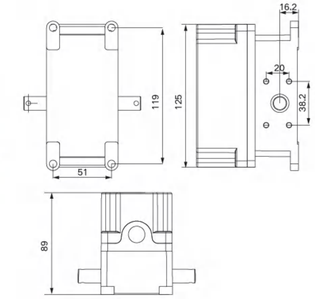

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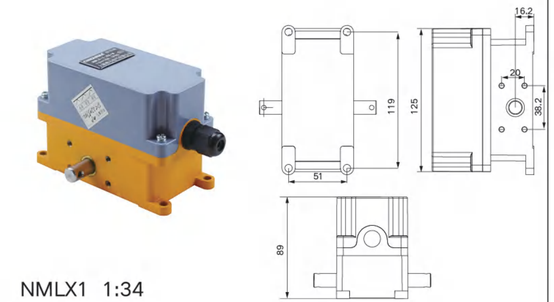

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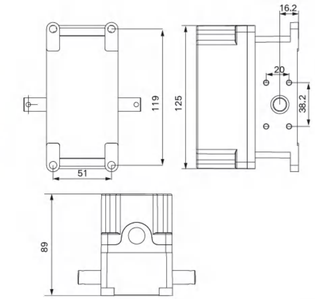

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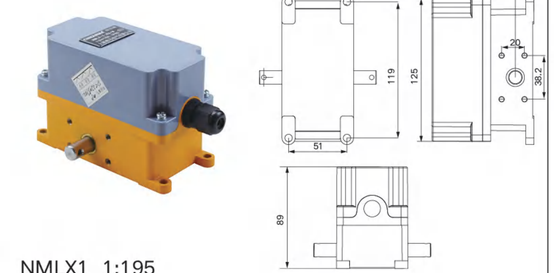

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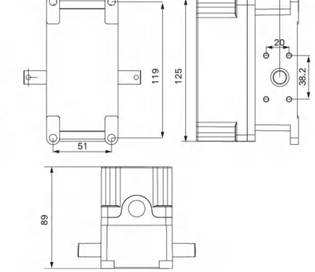

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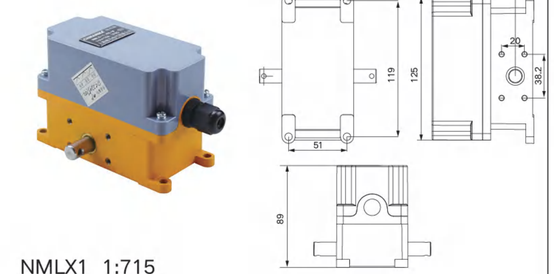

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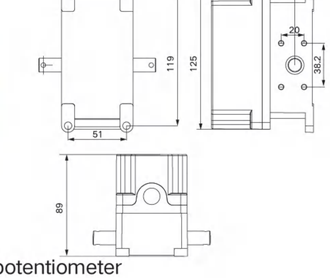

NMLX 带电位器 With potentiometer

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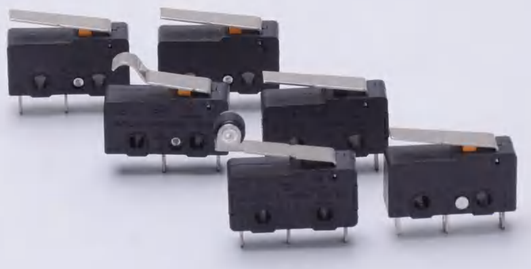


# SS 超小型微动开关
Subminiature Micro Switch

## 特点 Features

◎ 采用简单稳定的分割 2 片弹簧
◎ 可广泛应用于家用电器、OA 等用途
◎ 符合欧盟 REACH 法规

◎ Simple and stable split 2-piece spring is adopted
◎ It can be widely used in household appliances, OA and other purposes
◎ Compliance with EU REACH regulations

## 型号说明 Model Number Structure

SS - □ □ □ □ □ □ □ □
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

| 项目 Item | 代号 Code | 说明 Description |
|---|---|---|
| ① 额定值 Type switch | 10 | 10(3)A 125/250VAC |
| | 5 | 5(2)A 125/250VAC |
| ②接点间距 Contact spacing | 无 | 0.5mm |
| | 1M | 1mm |
| | 2M | 2mm |
| ③驱动杆 Drive rod | 无 | 按钮型 Button type |
| | Z □ | 摆杆型 Swing rod type |
| | W □ | R 型摆杆型 R-type swing rod type |
| | G □ | 滚轮摆杆型 Roller swing rod type |
| 注：□内数字“无或 0~99”，表示不同尺寸的摆杆流水号 Note: □ the number "None" or 0 ~ 99 "indicates the serial number of swing rods of different sizes | | |
| ④动作力 (OF) 最大 Maximum action force (OF) | 无 | 1.47N |
| | -F | 0.59N |
| | -F1 | 1.0N |
| | -F2 | 2.27N |
| | -F3 | 3.7N |
| ⑤接触种类 Contact type | 无 | 双投型 ( 转换 ) |
| | -2 | 常闭型 (NC) |
| | -3 | 常开型 (NO) |
| ⑥端子种类 Type of terminal | 无 | 焊接端子 |
| | T | #110 型端子 |
| | T1 | #110 型短端子 |
| | D | PCB 型端子 |
| | D1 | 左弯 PCB 型端子 |
| | D2 | 右弯 PCB 型端子 |
| ⑦壳体材料 Shell material | 无 | PMC |
| | P | PBT |
| ⑧特殊产品编码 Special product code | 无或 - 任意六位以内数字或英文符号 None or - any number or English symbol within six digits | |

## 接点规格 Contact Specification

| 项目 Project | 型号 Model | SS-10 | SS-5 |
|---|---|---|---|
| 接点 Contact | 规格 Specifications | 铆钉 Rivet | |
| | 材质 Material | 银合金 Silver alloy | |
| | 间隔 ( 标准值 ) Interval (standard value) | 0.5mm | |
| 最小适用负载 Minimum applicable load | DC5V 160mA | | |

## 性能 Performance

| 项目 Project | | 规格值 Specification value |
|---|---|---|
| 容许操作速度 Allowable operating speed | | 0.1mm~1m/s |
| 绝缘电阻 Insulation resistance | | 100MΩ 以上 |
| 接触电阻 ( 初始值 ) Contact resistance (initial value) | | 50mΩ 以上 |
| 耐压 Withstand voltage | 同级端子之间 Between terminals of the same level | AC1000V 50/60Hz 1min |
| | 带电金属部与地之间 Between live metal part and ground | AC1500V 50/60Hz 1min |
| | 各端子与非带电金属部之间 Between each terminal and non electrified metal part | AC1500V 50/60Hz 1min |
| 寿命 Life | 机械 Mechanics | 100 万次 |
| | 电气 Electrical | 5 万次 |
| 防护等级 Degree of protection | | IEC IP40 |
| 触电保护级 Electric shock protection level | | CLASS I |
| PTI( 漏电特性 ) PTI (leakage characteristic) | | 175 |
| 使用环境温度 / 湿度 Operating ambient temperature / humidity | | -25℃ ~+125℃，60%RH 以下 ( 不结冰、无凝露 ) (no ice and condensation) |

## 额定值 Rating

| 型号 Model | 额定电压 Rated voltage | 阻性负载 Resistive load |
|---|---|---|
| SS-10 | AC125V | 10A |
| | AC250V | 10A |
| SS-5 | AC125V | 5A |
| | AC250V | 5A |

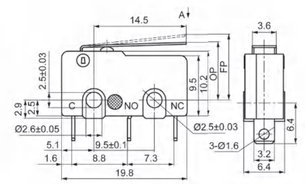




## 微动开关系列 MICRO SWITCH

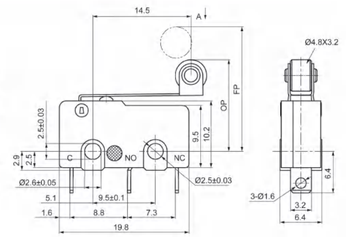


SS-5TD-Z04





SS-5TL-G01





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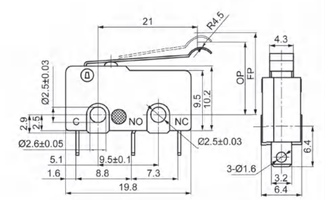
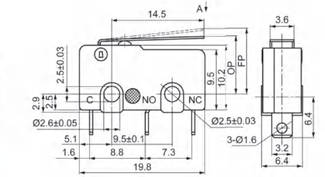


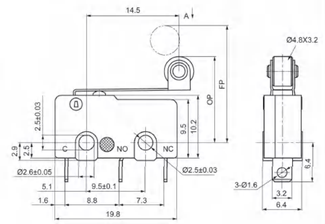


SS-5TL-Z01





SS-5TL-G02





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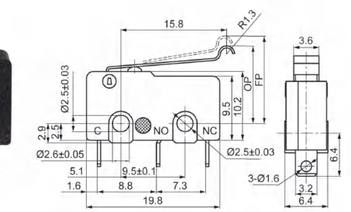
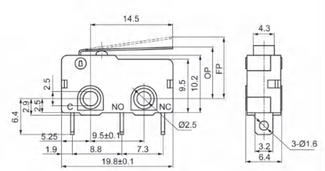




SS-5TL-Z02





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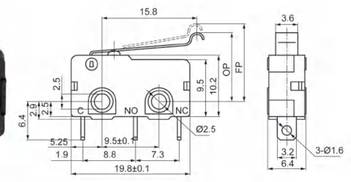
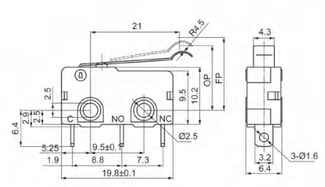


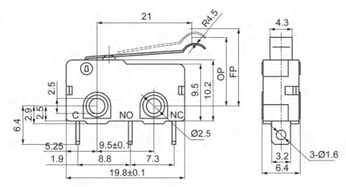


SS-5TL-Z04





SS-5T-W02



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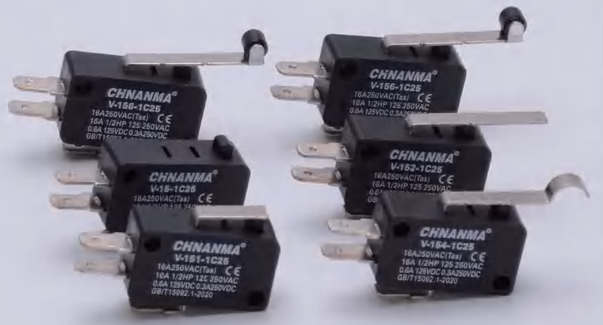


# V15 小型微动开关 Miniature Snap Action Switch

## 型号说明 Model Number Structure

V - 15 · 1 - 1 C2 5
① ② ③ ④

| 项目 Item | 代号 Code | 说明 Description |
|---|---|---|
| ① 额定电流 Rated Current | 15 | 15A |
| ②头部及传动杆 Head and driving rod | 无 | 按钮型 Button type |
| | 01 | 短杠杆型 Short lever type |
| | 02 | 杠杆型 Lever type |
| | 03 | 长杠杆型 Long lever type |
| | 04 | 弧形杠杆型 Arc lever type |
| | 05 | 滚轮短杠杆型 Roller short lever type |
| | 06 | 滚轮杠杆型 Roller lever type |
| ③触点形式 Contact form | 1 | 一常开 一常闭触点 1NO/1NC |
| | 2 | 一常闭触点 1NC |
| | 3 | 一常开触点 1NO |
| ④端子规格 Terminal specifications | C | #250 型端子 #250 terminal |
| | C2 | #187 型端子 #187 terminal |

## 规格 Specifications

| 项目 Item \ 型式 Type | | V 型 V type |
|---|---|---|
| 操作速度 Operation speed | | 0.05mm~1m/s( 按钮型 Button type) |
| 动作频率 Operating frequency | | 电气 Electrical：20 operations/min |
| 绝缘电阻 Insulation resistance | | 100MΩ 以上 ( 在 500VDC 以下 ) 100mΩ above(at 500VDC) |
| 接点电阻 Contact resistance | | 15mΩ 以下 ( 初期 ) 15mΩmax. (initial value) |
| 耐电压 Withstand voltage | 非连续端子间 Non-continuous terminals | 1,000VAC, 50/60Hz 持续 1 分钟 1000VAC, 50/60 Hz for 1 minute |
| | 载电流和无载电流零件间，端子和接地之间 current-carrying and non-current-carrying metal parts, Between terminal and earthing | 2,000VAC, 50/60Hz 持续 1 分钟 2000VAC, 50/60 Hz for 1 minute |
| 振动 Vibration | 误动作 Misoperation | 10 至 55Hz, 1.5mm 双振幅 10 to 55Hz,1.5mm pairs swing |
| 冲击 Shock | 耐久 Durable | 最大 1,000m/S2( 约 100G) Maximum 1000 m/S2 (100G) |
| | 误动作 Misoperation | 最大 200m/S2( 约 100G) Maximum 200 m/S2 (100G) |
| 寿命 Life | 电气 Electrical | 16A，10 万次以上 More than 100000 times |
| 使用周围温度 Temperature | | 使用时 :-20~+70℃ ( 没有结冰 ) Using：-20~+70℃ ( With no icing ) |
| 使用周围湿度 Humidity | | 85%RH 以下 (+5~+35℃ )Below 85% RH |

## 额定值 Ratings

| 项目 Item / 规格 Spec | 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | | 突入电流 (A) Inrush Current | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | | | |
| | | NC | NO | NC | NO | NC | NO | NC | NO | NC | NO |
| 16A | 250VAC | 15 | | 2 | | 10 | | 3 | | 40 以下 max. | |
| | 8VDC | 15 | | 4 | | 10 | | 6 | | | |
| | 30VDC | 10 | | 4 | | 10 | | 4 | | | |
| | 125VDC | 0.6 | | 0.1 | | 0.6 | | 0.1 | | | |
| | 250VDC | 0.3 | | 0.05 | | 0.3 | | 0.05 | | | |

## 接点型式 Contact Form



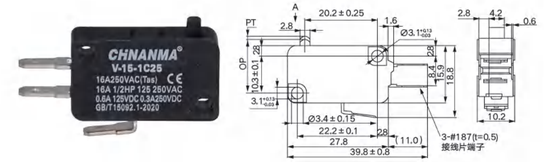

## 动作特性 Operating Characteristics

| 型式 Models | V-15 | V-15-1C25 | V-151-1C25 | V-152-1C25 | V-153-1C25 | V-154-1C25 | V-155-1C25 | V-156-1C25 |
|---|---|---|---|---|---|---|---|---|
| 操作力 Operating force | OF 最大 (Max.) | 1.96N | 1.96N | 1.23N | 0.69N | 1.23N | 2.35N | 1.23N |
| 回弹力 Release force | RF 最小 (Min.) | 0.49N | 0.49N | 0.14N | 0.06N | 0.14N | 0.49N | 0.14N |
| 预行程 Pre-travel | PT 最大 (Max.) | 1.2mm | 1.2mm | 4.0mm | 9.0mm | 4.0mm | 1.6mm | 4.0mm |
| 过行程 Over travel | OT 最小 (Min.) | 1.0mm | 0.8mm | 1.6mm | 2.0mm | 1.6mm | 0.8mm | 1.6mm |
| 响应差的行程 Stroke with poor response | MD 最大 (Max.) | 0.4mm | 0.6mm | 1.5mm | 2.8mm | 1.5mm | 0.6mm | 1.5mm |
| 动作位置 Operating position | OP(mm.) | 14.7±0.4mm | 15.2±0.5mm | 15.2±1.2mm | 15.2 $^{+2.6}_{-3.2}$mm | 18.7±1.2mm | 20.7±0.6mm | 20.7±1.2mm |

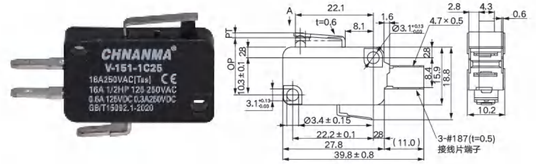




## 微动开关系列 MICRO SWITCH




V-15-1C25

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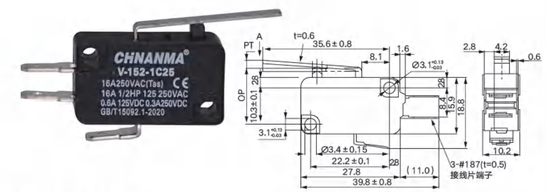


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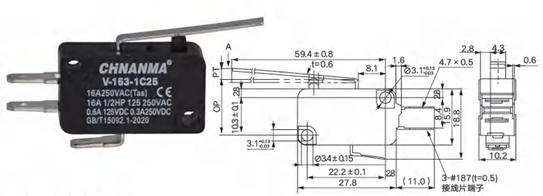


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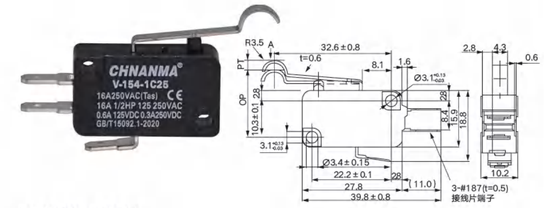


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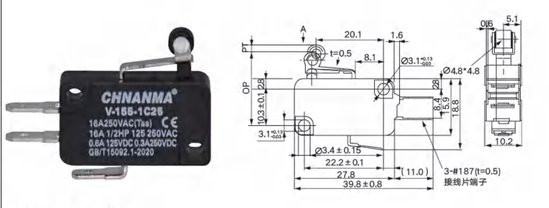


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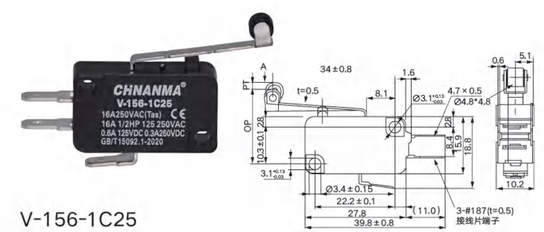
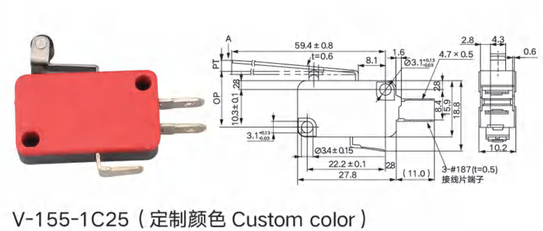
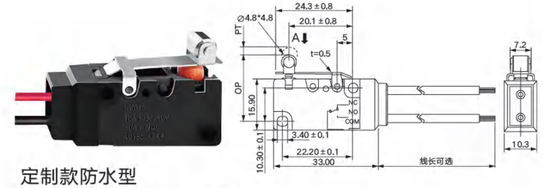



V-156-1C25



V-155-1C25（定制颜色 Custom color）



定制款防水型
Customized waterproof type



NM-V15-11M

CHNANMA®

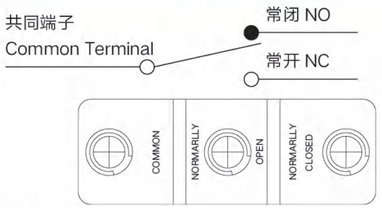


# NM 卧式微动开关
Horizontal Micro Switch

## 特点 Features

◎ 采用简单稳定的分割 2 片弹簧
◎ 可广泛应用于家用电器、OA 等用途
◎ 符合欧盟 REACH 法规
◎ Phenolic bakelite shell
◎ Various actuators and some with adjustable operating position (such as TM1701)
◎ High accuracy wide range of operation speed

## 接点型式 Contact Form




* 黄铜端子螺丝，型号后加 (-T)。
* Brass terminal screw, model plus (-T).

## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | | 突入电流 (A) Inrush Current | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | | | |
| | NC | NO | NC | NO | NC | NO | NC | NO | | |
| 125VAC | 15 | | 3 | 1.5 | 15 | | 5 | 2.5 | 30 以下 max. | 15 以下 max. |
| 250VAC | 15 | | 2.5 | 1.25 | 15 | | 3 | 1.5 | | |
| 500VAC | 3 | | 1.5 | 0.75 | 2.5 | | 1.5 | 0.75 | | |
| 8VDC | 15 | | 3 | 1.5 | 15 | | 5 | 2.5 | | |
| 14VDC | 15 | | 3 | 1.5 | 10 | | 5 | 2.5 | | |
| 30VDC | 6(2) | | 3 | 1.5 | 5 | | 5 | 2.5 | | |
| 125VDC | 0.4 | | 0.4 | 0.4 | 0.05 | | 0.05 | 0.05 | | |
| 250VDC | 0.2 | | 0.2 | 0.2 | 0.03 | | 0.03 | 0.03 | | |

## 规格 Specifications

| | |
|---|---|
| 操作速度 Operation speed | 0.05mm 至 1m/s ( 柱塞型 )<br>0.05mm-1m/s (Plunger type) |
| 动作频率 Operating frequency | 电气 :20 次 / 分<br>Electical: 20 operations/min |
| 接点电阻 Contact resistance | 15mΩ 以下 ( 初期 )<br>15mΩ max. (initial value ) |
| 绝缘电阻 Insulation resistance | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 电介强度 Dielectric strength | 非连续端子间 1,000VAC, 50/60Hz 持续 1 分钟<br>1000VAC, 50/60 Hz for 1 minute between terminals of the same polarity |
| | 载电流与无载电流零件间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts |
| | 端子和接地之间 1,500VAC, 50/60Hz 持续 1 分钟<br>1500VAC, 50/60 Hz for 1 minute between each terminal and ground |
| 振动 Vibration | (*10 至 20Hz): 1.5mm<br>变振幅误动作耐久 : 10 至 55Hz<br>(*10 to 20Hz): 1.5<br>Vibration amplitude action duration: 10 to 55Hz |
| 冲击 Shock | 机械耐久 :1,000m/Sec2( 约 100G ’ S)<br>误动作耐久 :300m/Sec2( 约 30G ’ S)<br>Mechanical durable: 1, 000m/Sec2 (about 100G'S)<br>Malfunction: 300m/Sec2 (about 30G'S) |
| 周围温度 Ambien temperature | 使用时：-20~+80℃（没有结冰）<br>Using：-20~+80℃（With no icing ) |
| 湿度 Humidity | 泛用型 : 85%RH 以上 密封型 : 95%RH<br>General purpose type: 85% RH max., Sealed type: 95% RH max. |
| 电气寿命 Electrical life | 500,000 次以上<br>500,000 operations above |
| 重量 Weight | 约 22 至 58g About 22 to 58g |

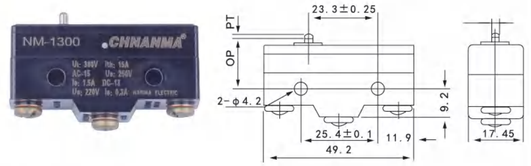
## 动作特性 Operating Characteristics

| 型式 Models | TM1300 | TM1301 | TM1303 | TM1305 | TM1306 | TM1307 | TM1308 | TM1309 | TM1701 | TM1702 | TM1703 TM1725 | TM1704 TM1714 | TM1705 | TM1743 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OF 最大 (Max.) | 350g | 300g | 300g | 350g | 350g | 350g | 350g | 350g | 70g | 160g | 100g | 160g | 10g | 160g |
| RF 最小 (Min.) | 114g | 50g | 50g | 114g | 114g | 114g | 114g | 114g | 14g | 28g | 22g | 42g | 3g | 42g |
| PT 最大 (Max.) | 0.4mm | 4mm | 4mm | 0.4mm | 0.4mm | 0.4mm | 0.4mm | 0.4mm | 10mm | 5mm | 7.1mm | 2.7mm | 20mm | 2.7mm |
| OT 最小 (Min.) | 0.13mm | 1.6mm | 1.6mm | 1.6mm | 1.6mm | 5.5mm | 3.58mm | 3.58mm | 5.6mm | 2mm | 4mm | 2.4mm | 5.6mm | 2.4mm |
| MD 最大 (Max.) | 0.05mm | 1.3mm | 1.3mm | 0.05mm | 0.05mm | 0.05mm | 0.05mm | 0.05mm | 1.27mm | 1mm | 1.02mm | 0.5mm | 3mm | 0.5mm |
| FP 最大 (Max.) | | 20.6mm | 31.8mm | | | | | | 28.2mm | 24.8mm | 36.5mm | 32.5mm | | 43.6mm |
| OP(mm) | 15.9±0.4 | 17.4±0.8 | 28.6±0.8 | 28.2±0.5 | 21.5±0.5 | 21.8±0.8 | 33.4±1.2 | 33.4±1.2 | 19±0.8 | 19±0.4 | 30.2±0.8 | 30.2±0.4 | 19±0.8 | 43.1±0.8 |

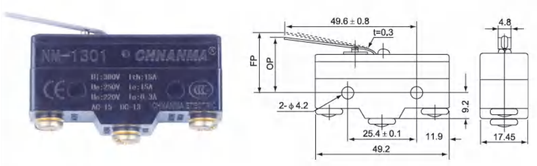




## 微动开关系列 MICRO SWITCH




NM-1300

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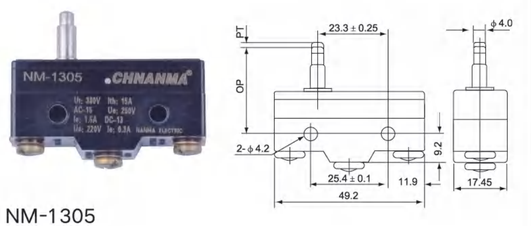


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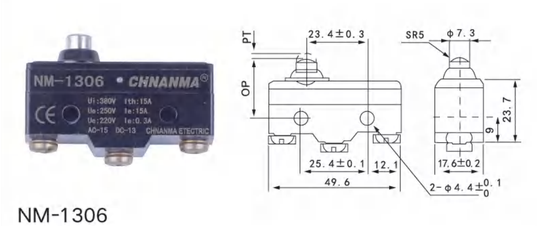


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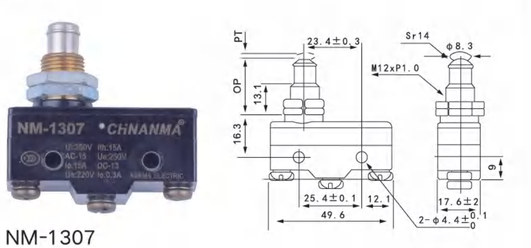


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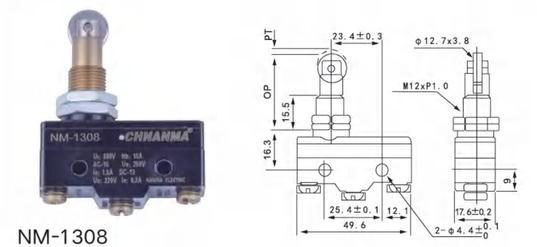


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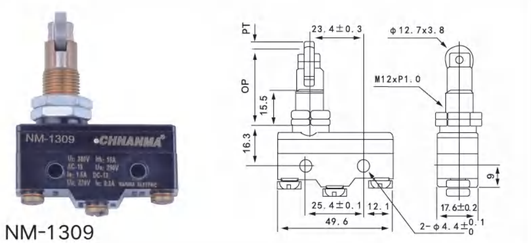


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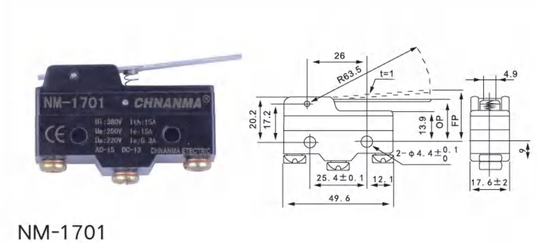
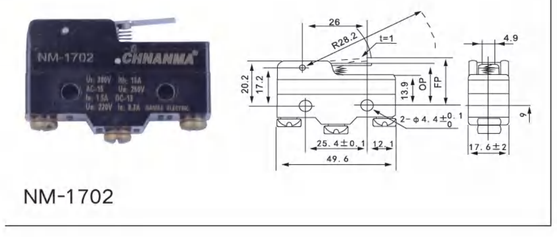
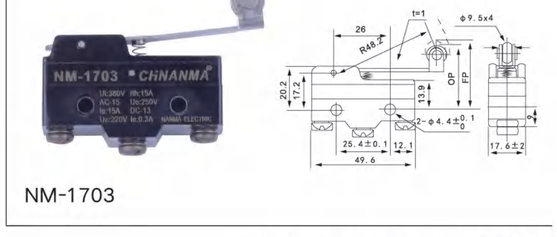



NM-1701




NM-1702




NM-1703

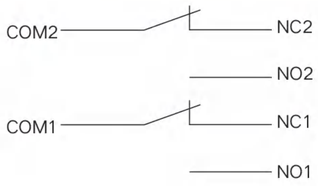


# ADZ 双联式微动开关 Double Micro Switch

## 型号说明 Model Description

◎ 很适合切换在不同电压下的电路操作，且适于控制两个独立的电路
◎ It is suitable for switching circuit operation at different voltages and for controlling two independent circuits

## 接点型式 Contact Form




## 规格 Specifications

| | | |
|---|---|---|
| 操作速度 Operation speed | | 0.1mm 至 1m/s *1<br>0.1mm-1m/s *1 |
| 动作频率 Operating frequency | 机械 Mechanics | 240 次 / 分<br>240 operations/min |
| | 电气 Electical | 20 次 / 分<br>20 operations/min |
| 绝缘电阻 Insulation resistance | | 100MΩ 以上 ( 在 500VDC 下 )<br>100mΩ min. （below 500VDC ) |
| 接触电阻 contact resistance | | 15mΩ 以下 ( 初期 )<br>15mΩ max. (initial value ) |
| 绝缘强度 Insulation strength | | 1000ACV，50/60Hz，1 分钟，在非连续性端子之间<br>1000ACV，50/60Hz，1 minute，Between discontinuous terminals |
| | | 1500ACV，50/60Hz，1 分钟，在带电金属部与不带电金属部之间、带电金属部与地线之间以及开关之间<br>1500ACV，50/60Hz，1 minute，Between the live metal part and the non live metal part, between the live metal part and the ground wire, and between the switch |
| 耐冲击 Impact resistance | 误动作 Misoperation | 10~55Hz 双振幅 1.5mm*2；<br>300m/s2 以下 *1*2<br>10~55Hz double amplitude 1.5mm*2；<br>Below 300m / S2*1* 2 |
| | 毁坏 Damage | 毁坏：1000m/s2 以下<br>Damage: below 1000m / s2 |
| 电气寿命 Electrical life | 机械 Mechanics | 1000000 次以上<br>More than 1000000 times |
| | 电气 Electical | 500000 次以上<br>More than 500000 times |
| 防护等级 Degree of protection | | IP00 |
| 触电保护等级 Electric shock protection level | | Class I |
| 漏电性能 (PTI) Leakage performance(PTI) | | 175 |
| 使用周围温度 Temperature | | 使用时：-25~+80℃（没有结冰）<br>Using：-25~+80℃（With no icing） |
| 使用周围湿度 Humidity | | 35%~85%RH |
| 质量 Quality | | 约 30 至 50g About 30 to 50g |

## 额定值 Ratings

| 额定电压 Rated Voltage | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | 电阻性负载 Resistance Load | | 灯泡负载 Lamp Load | | 电感性负载 Inductive Load | | 马达负载 Motor Load | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 10 | | 2 | 1 | 6 | | 3 | 1.5 |
| 250VAC | 10 | | 1.5 | 0.7 | 4 | | 2 | 1 |
| 8VDC | 10 | | 3 | 1.5 | 6 | | 5 | 2.5 |
| 14VDC | 10 | | 3 | 1.5 | 6 | | 5 | 2.5 |
| 30VDC | 10 | | 3 | 1.5 | 4 | | 3 | 1.5 |
| 125VDC | 0.5 | | 0.5 | | 0.05 | | 0.05 | |
| 250VDC | 0.25 | | 0.25 | | 0.03 | | 0.03 | |

## 动作特性 Operating Characteristics

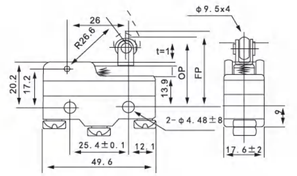
| 型式 Models | ADZ-10GW22-1B | ADZ-10GW2-1B | ADZ-10GW2-1B | ADZ-10GW-1B |
|---|---|---|---|---|
| OF 最大 (Max.) | 3.92N | 3.92N | 2.09N | 1.67N |
| RF 最小 (Min.) | 0.83N | 0.83N | 0.41N | 0.27N |
| OT 最小 (Min.) | 0.9mm | 0.9mm | 1.2mm | 1.6mm |
| MD 最大 (Max.) | 2.4mm | 2.4mm | 3.3mm | 4mm |
| FP 最大 (Max.) | 39.7mm | 39.7mm | 47.6mm | 46.3mm |
| OP(mm) | 30.2±0.8mm | 30.2±0.8mm | 31.8±0.8mm | 21.8±1mm |





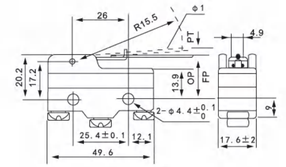
## 微动开关系列 MICRO SWITCH



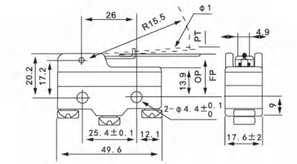

NM-1704



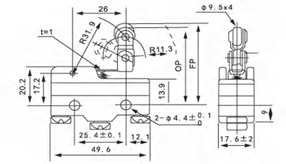

NM-1705




NM-1724




NM-1743



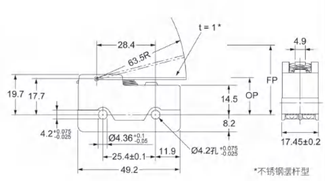
NM/TM 软护套 Flexible sheath



NM/TM 硬护套 Rigid sheath

## 双联微动开关系列 MICRO SWITCH



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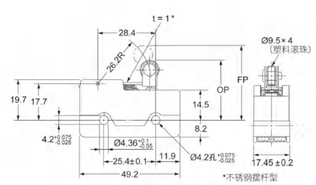


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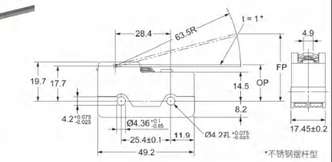


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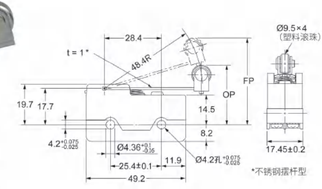



ADZ-10GW2-B



# Z-15G 防水型微动开关 Waterproof microswitch

## 特征 FEATURE

◎ 高开闭容量 (15A)
◎ 高精确度
◎ OP 精度高达 ±0.4mm
◎ 广泛操作速度范围

◎ High switch on and off capacity(15A)
◎ High accuracy
◎ OP accuracy up to ±0.4mm
◎ Wide range of operation speed

## 规格 /Specification

| 额定电压 Rated Voltage (V) | 非电感性负载 Noninductive Load (A) | | | | 电感性负载 Inductive Load (A) | | 突入电流 Lnrush current | |
|---|---|---|---|---|---|---|---|---|
| | 电阻 Resistance Load | | 电感 Inductive | | 电动负荷 Motor Load | | | |
| | NC | NO | NC | NO | NC | NO | NC | NO |
| 125VAC | 15 | | 15 | | 5 | 2.5 | 30 最大 (Max) | 15 最大 (Max) |
| 250VAC | 15 | | 15 | | 3 | 1.5 | | |
| 500VAC | 3 | | 2.50 | | 1.5 | 0.75 | | |
| 8VDC | 15 | | 15 | | 5 | 5 | | |
| 14VDC | 15 | | 1 | | 5 | 5 | | |
| 30VDC | 6(2) | | 5 | | 5 | 5 | | |
| 125VDC | 0.4 | | 0.05 | | 0.05 | 0.05 | | |
| 250VDC | 0.2 | | 0.03 | | 0.03 | 0.03 | | |

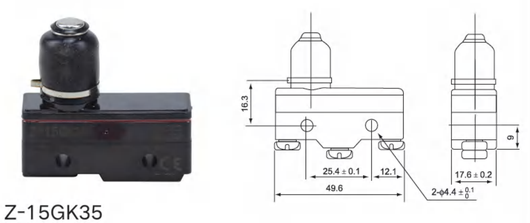
## 特性 /Characterstics

| | |
|---|---|
| 操作速度 Operation speed | 0.01mm~1m/swc |
| 工作频率 Operation frequentcy | 机械的：240 次 / 分 电气的：20 次 / 分 Mechanical：240 times/min Electrical：20 times/min |
| 绝缘电阻 Insulation resistance | 1000MΩ 以上 (500VDC 以下 ) 1000MΩ min. (At 500VDC 以下 ) |
| 接触电阻 Contact r8sistance | 20mΩ 以下 ( 初期 ) 20mΩ or less (initial) |
| 耐压 Dielectric xtrength | 非串联的端子间 1,000AVC 持续一分钟； 端子间和地间 2,000VAC 持续一分钟<br>1,000AVC for one minute between non-series terminals; 2,000VAC for one minute between terminals and ground |
| 振动 Vibration | 机械承受力 双震幅：10~55Hz 1.5mm Mechenical durabiity 10~55Hz 1.5mm double amphtude |
| 环境温度 Ambient operating | -25℃ ~+80℃ |
| 温湿度 Humidity | <85%RH max |
| 使用寿命 Serivce life | 机械：10,000,000 以上 Mechanocally：10,000,000 operations min<br>电气：5000,000 以上 Electrical：5000,000 or more |





## 防水型微动开关 Waterproof microswitch

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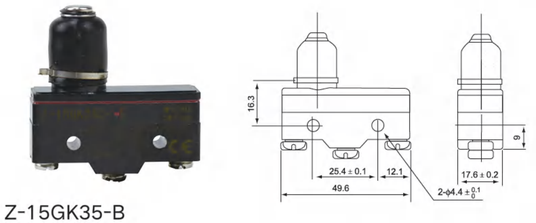


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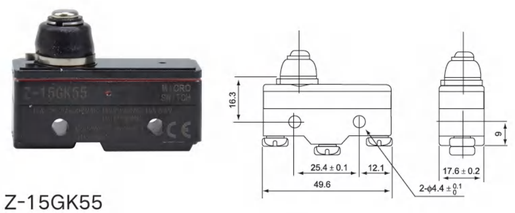


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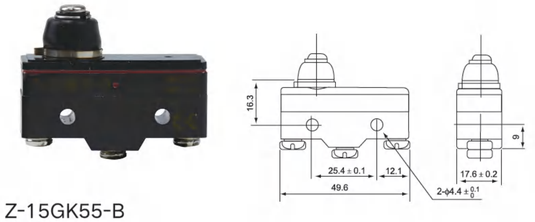


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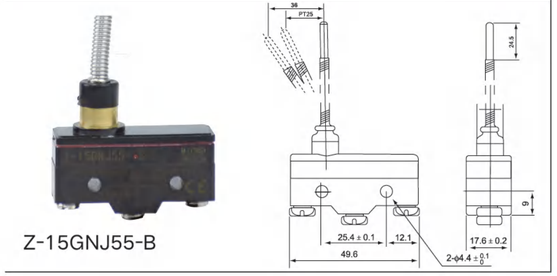


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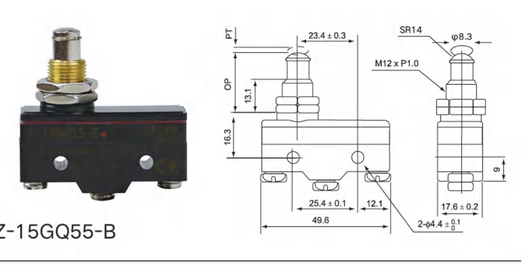


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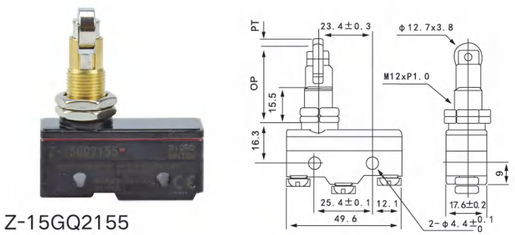


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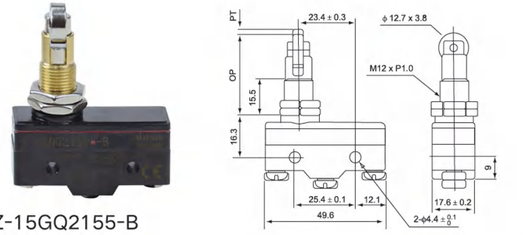


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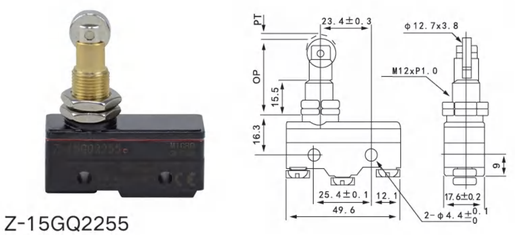


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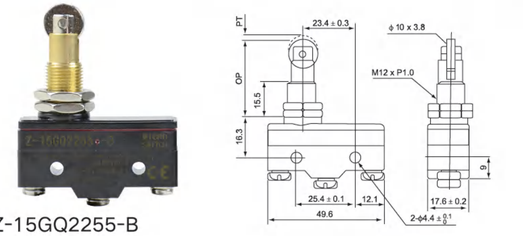


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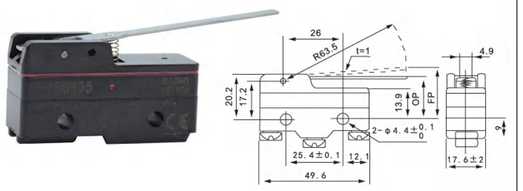
## 微动开关系列 MICRO SWITCH

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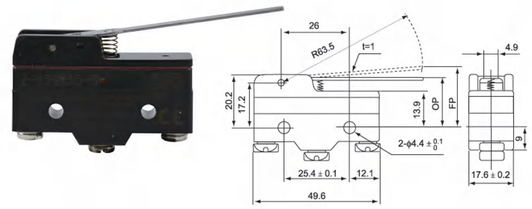


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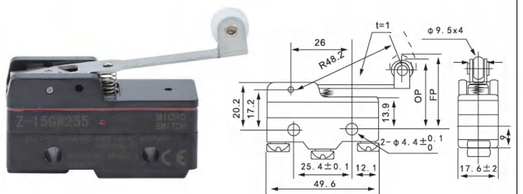


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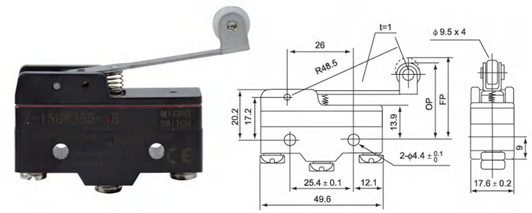


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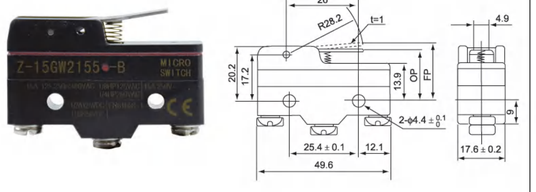


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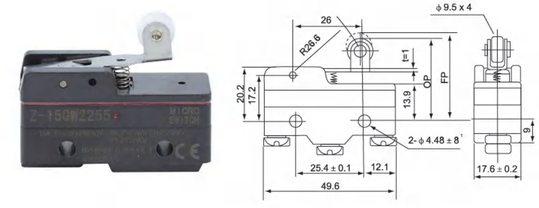


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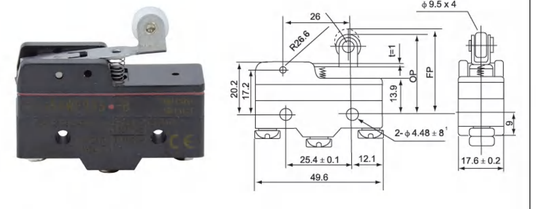
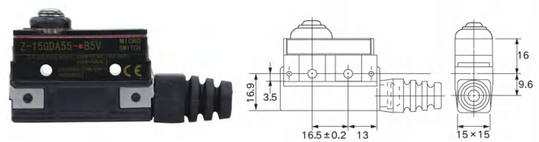



Z-15GW2255-B





## 微动开关系列 MICRO SWITCH

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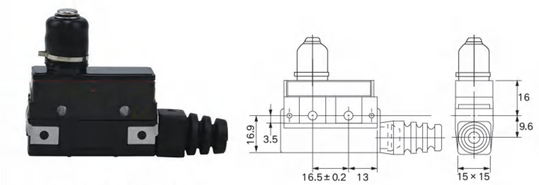


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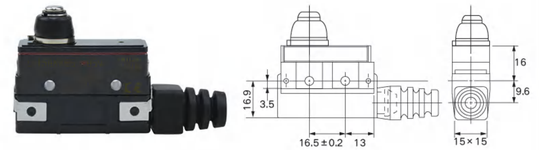


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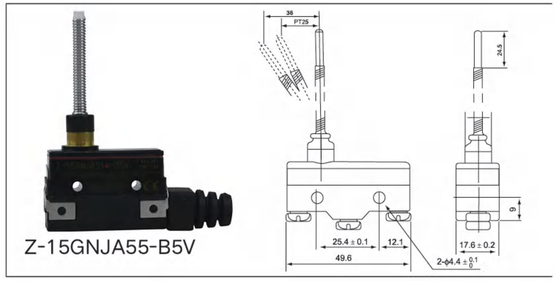


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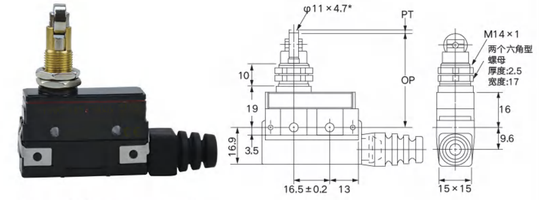


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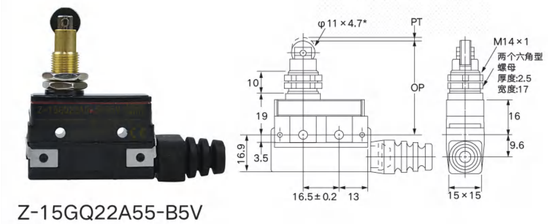


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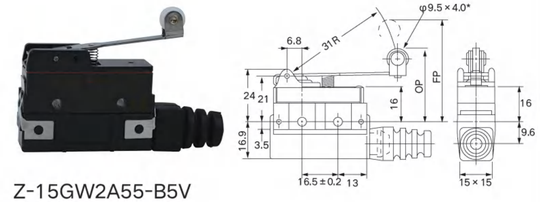


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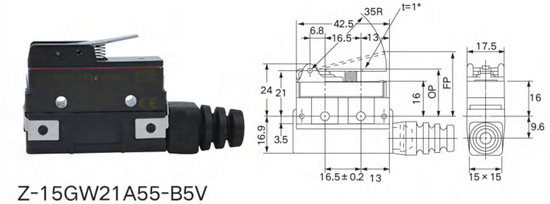


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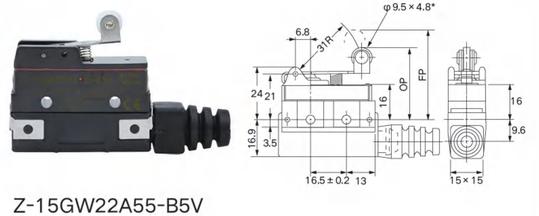


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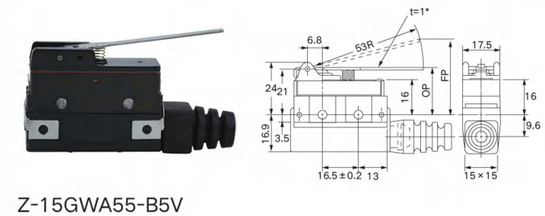



Z-15GWA55-B5V



# LX33 限位开关 Limit Switch

## 概述 summarize

LX33 行程开关适用于交流 50-60HZ;AC380V;DC220V; 电流 10A 的控制线路中，作为起重机平移机构的行程限制及终端保护。
正常工作在环境温度 -5℃ ~+40℃；
环境温度 90%；
机械寿命 100 万次，防护等级 IP44;
符合 IEC337-1 GB14048.5-2001 标准。

LX33 stroke switch is suitable for AC 50-60HZ; AC380V; DC220V; In the control line of 10A current, it is used as the travel limitation and terminal protection of the crane translation mechanism.
Normal operation at ambient temperature -5℃ ~+40℃ ;
Ambient temperature 90%;
Mechanical life of 1 million times, protection grade IP44;
Comply with IEC337-1 GB14048.5-2001 standard.

## 正常工作条件 Normal working condition

◎ 周围空气温度上限 40℃；
◎ 周围空气温度下限值不低于 -5℃；
◎ 周围空气温度 24h 的平均值不超过 35℃。
◎ 海拔：安装地点的海拔不超过 2000m。
◎ 湿度：空气相对湿度在最高温度为 40℃时，不超过 50%，在较 1 低温度下可以有较高的相对湿度，最湿月的月平均最低温度不超过 25℃，该月的月平均最大相对湿度不超过 90%。由于温度变化发生在产品上的凝露情况必须采取措施。
◎ 污染等级：污染等级为 3 级。
◎ 安装类别：安装类别为 II 类。

◎ Upper ambient air temperature of 40℃ ;
◎ ambient air temperature lower limit of not less than -5℃ ;
◎ The average ambient air temperature for 24h does not exceed 35℃ .
◎ Elevation: The elevation of the installation site does not exceed 2000m.
◎ Humidity: The relative humidity of the air does not exceed 50% when the maximum temperature is 40℃ , and can have a higher relative humidity at a lower temperature, the monthly average minimum temperature of the wettest month does not exceed 25 ℃ , and the monthly average maximum relative humidity of the month does not exceed 90%. Measures must be taken due to temperature changes occurring in the condensation situation on the product.
◎ Pollution level: The pollution level is 3.
◎ Installation Category: The installation category is Category II.

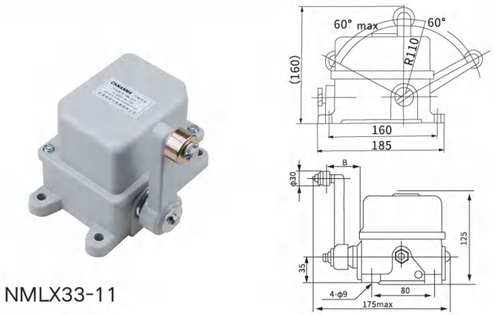
## 技术参数 Technical Parameter

| | | | |
|---|---|---|---|
| 防护等级 Class of protection | IP42 | 机械寿命 Mechanical life | 60X104 |
| 约定发热电流 Conventional heating current | 20A | 环境温度 Ambient temperature | -5℃ +40℃ |
| 额定电压 Rated voltage | AC380V/DC220V | 相对湿度 Relative humidity | ≤ 90% |
| 额定控制电流 Rated control current | AC9.5A/DC0.55A | 应用范围 Scope of application | 控制线路中作为起重机平移机构或起升机构的行程限制及终端保护 The travel limitation and terminal protection of the crane translation mechanism or lifting mechanism in the control line |





## 限位开关系列 Limit Switch

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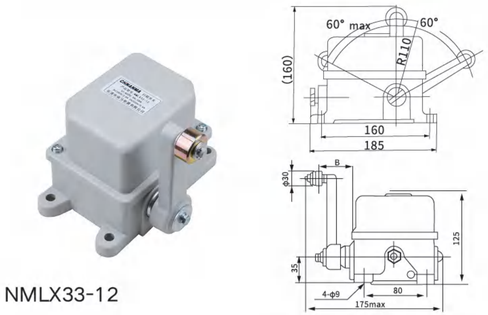


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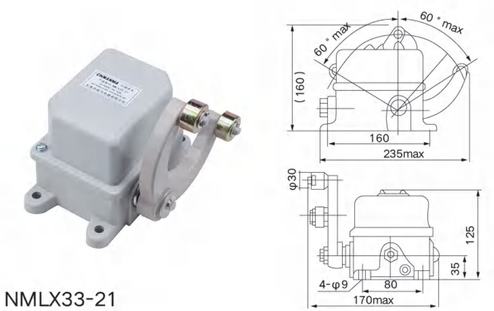


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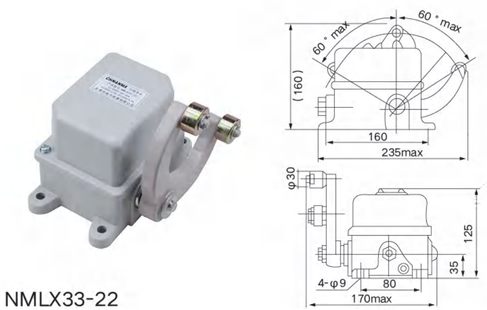


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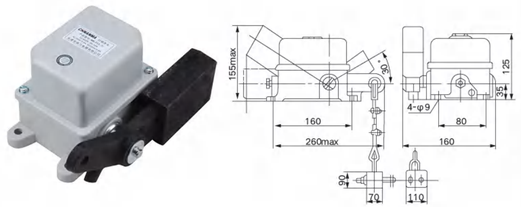


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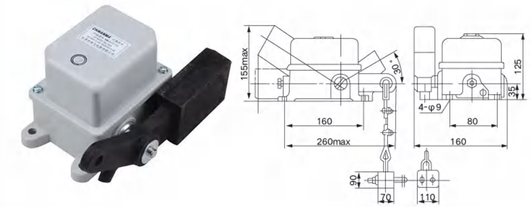


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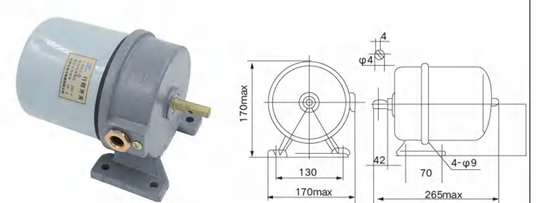



NMLX33-41/42



NMLX33-31/32 重锤附件 Weight attachment




耐高温可选
High temperature optional

# DQX1/LX205 重型限位开关 Heavy duty limit switch

## 概述 summarize

DQX1/LX205 重型限位开关适用于交流 50-60HZ;AC380V;DC220V;电流 10A 的控制线路中，作为起重机平移机构的行程限制及终端保护。
正常工作在环境温度 -5℃ ~+40℃；
环境温度 90%；
机械寿命 100 万次，防护等级 IP44;
符合 IEC337-1 GB14048.5-2001 标准。

DQX1/LX205 Heavy duty limit switch is suitable for AC 50-60HZ; AC380V; DC220V; In the control line of 10A current, it is used as the travel limitation and terminal protection of the crane translation mechanism.
Normal operation at ambient temperature -5℃ ~+40℃ ;
Ambient temperature 90%;
Mechanical life of 1 million times, protection grade IP44;
Comply with IEC337-1 GB14048.5-2001 standard.

## 正常工作条件 Normal working condition

◎ 周围空气温度上限 40℃；
◎ 周围空气温度下限值不低于 -5℃；
◎ 周围空气温度 24h 的平均值不超过 35℃。
◎ 海拔：安装地点的海拔不超过 2000m。
◎ 湿度：空气相对湿度在最高温度为 40℃时，不超过 50%，在较 1 低温度下可以有较高的相对湿度，最湿月的月平均最低温度不超过 25℃，该月的月平均最大相对湿度不超过 90%。由于温度变化发生在产品上的凝露情况必须采取措施。
◎ 污染等级：污染等级为 3 级。
◎ 安装类别：安装类别为 II 类。

◎ Upper ambient air temperature of 40℃ ;
◎ ambient air temperature lower limit of not less than -5℃ ;
◎ The average ambient air temperature for 24h does not exceed 35℃ .
◎ Elevation: The elevation of the installation site does not exceed 2000m.
◎ Humidity: The relative humidity of the air does not exceed 50% when the maximum temperature is 40℃ , and can have a higher relative humidity at a lower temperature, the monthly average minimum temperature of the wettest month does not exceed 25 ℃ , and the monthly average maximum relative humidity of the month does not exceed 90%. Measures must be taken due to temperature changes occurring in the condensation situation on the product.
◎ Pollution level: The pollution level is 3.
◎ Installation Category: The installation category is Category II.

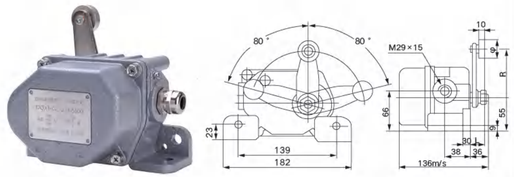
## 技术参数 Technical Parameter

| | | | |
|---|---|---|---|
| 防护等级<br>Class of protection | IP42 | 机械寿命<br>Mechanical life | 60X104 |
| 约定发热电流<br>Conventional heating current | 20A | 环境温度<br>Ambient temperature | -5℃ +40℃ |
| 额定电压 Rated voltage | AC380V/DC220V | 相对湿度<br>Relative humidity | ≤ 90% |
| 额定控制电流<br>Rated control current | AC9.5A/DC0.55A | 应用范围<br>Scope of application | 控制线路中作为起重机平移机构或起升机构的行程限制及终端保护<br>The travel limitation and terminal protection of the crane translation mechanism or lifting mechanism in the control line |





## 限位开关系列 LIMIT SWITCH

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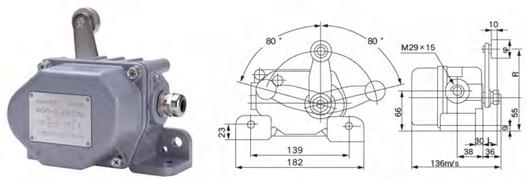


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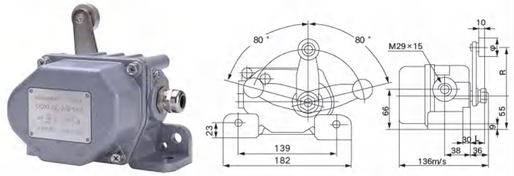


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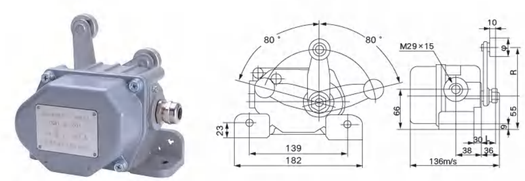


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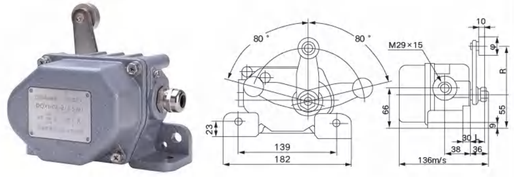


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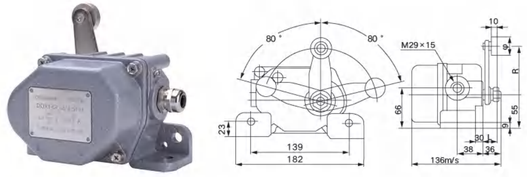


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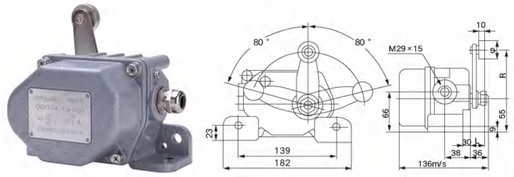


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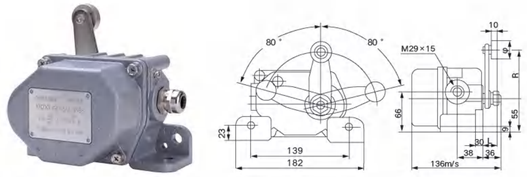


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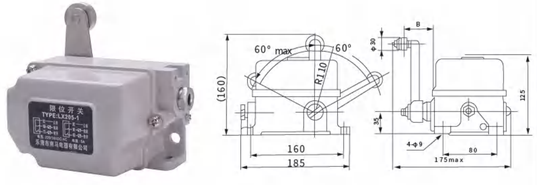
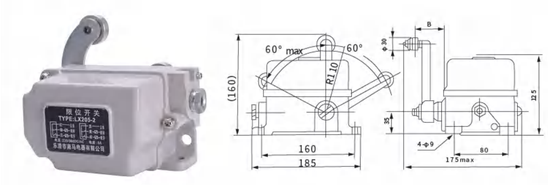



LX205-1




LX205-2



# NMLXT/TA 重型限位开关 Heavy duty limit switch

## 概述 summarize

NMLXT/TA 重型限位开关适用于交流 50-60HZ;AC380V;DC220V; 电流 10A 的控制线路中，作为起重机平移机构的行程限制及终端保护。
正常工作在环境温度 -20℃ ~80℃；
环境温度 90%；
机械寿命 100 万次，防护等级 IP44;
符合 IEC337-1 GB14048.5-2001 标准。

DQX1/LX205 Heavy duty limit switch is suitable for AC 50-60HZ; AC380V; DC220V; In the control line of 10A current, it is used as the travel limitation and terminal protection of the crane translation mechanism.
Normal operation at ambient temperature -5℃ ~+40℃ ;
Ambient temperature 90%;
Mechanical life of 1 million times, protection grade IP44;
Comply with IEC337-1 GB14048.5-2001 standard.

## 正常工作条件 Normal working condition

◎ 周围空气温度上限 80℃；
◎ 周围空气温度下限值不低于 -20℃；
◎ 周围空气温度 24h 的平均值不超过 35℃。
◎ 海拔：安装地点的海拔不超过 2000m。
◎ 湿度：空气相对湿度在最高温度为 40℃时，不超过 50%，在较 1 低温度下可以有较高的相对湿度，最湿月的月平均最低温度不超过 25℃，该月的月平均最大相对湿度不超过 90%。由于温度变化发生在产品上的凝露情况必须采取措施。
◎ 污染等级：污染等级为 3 级。
◎ 安装类别：安装类别为 II 类。

◎ Upper ambient air temperature of 80℃ ;
◎ ambient air temperature lower limit of not less than -20℃ ;
◎ The average ambient air temperature for 24h does not exceed 35℃ .
◎ Elevation: The elevation of the installation site does not exceed 2000m.
◎ Humidity: The relative humidity of the air does not exceed 50% when the maximum temperature is 40℃ , and can have a higher relative humidity at a lower temperature, the monthly average minimum temperature of the wettest month does not exceed 25 ℃ , and the monthly average maximum relative humidity of the month does not exceed 90%. Measures must be taken due to temperature changes occurring in the condensation situation on the product.
◎ Pollution level: The pollution level is 3.
◎ Installation Category: The installation category is Category II.

## 技术参数 Technical Parameter

| | | | |
|---|---|---|---|
| 防护等级<br>Class of protection | IP42 | 机械寿命<br>Mechanical life | 60X104 |
| 约定发热电流<br>Conventional heating current | 20A | 环境温度<br>Ambient temperature | -20℃ ~80℃ |
| 额定电压 Rated voltage | AC380V/DC220V | 相对湿度<br>Relative humidity | ⩽ 90% |
| 额定控制电流<br>Rated control current | AC9.5A/DC0.55A | 应用范围<br>Scope of application | 控制线路中作为起重机平移机构或起升机构的行程限制及终端保护<br>The travel limitation and terminal protection of the crane translation mechanism or lifting mechanism in the control line |



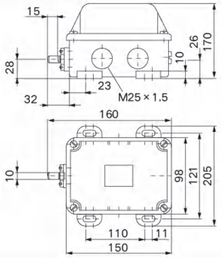


## 限位开关系列 LIMIT SWITCH



NMLXT130


NMLXT064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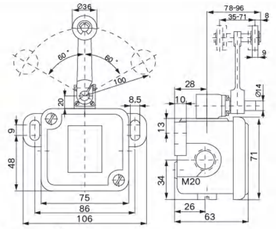
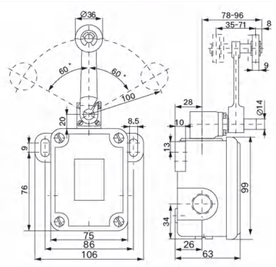

TL 422-01Y 手动 Manual operation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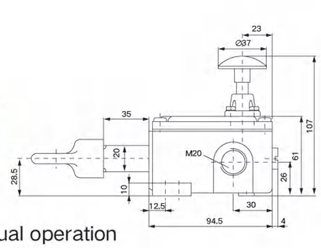
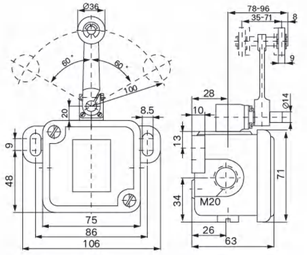

TL 441-01Y 手动 Manual operation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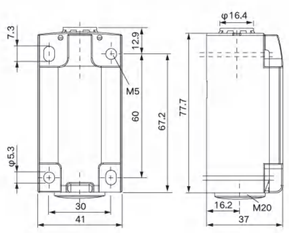
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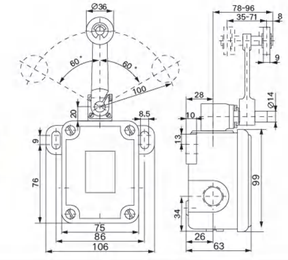

TD452-12Y-2512


INO/2NC 3NC

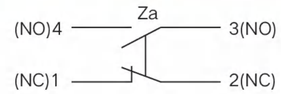



# Z4V 金属型行程开关
Metal type travel switch

## 特点 Features

- ◎ 经济金属型
- ◎ 不锈钢滚轮，冲头及弹簧
- ◎ 特大 ±95 ° 摇管摆幅
- ◎ 导管连接器尺寸标配 M20×1.5
- ◎ Economic metal type
- ◎ Stainless steel roller, punch and spring
- ◎ Swing amplitude, extra large ± 95 °
- ◎ M20x1.5 cable gland that can be equipped

## 接触形式 Contact form




## 规格 Specifications

| | |
|---|---|
| 双断开机械功用 Double Break Mechanism | INO+INC Force Break snap action 强迫断开快速机芯 |
| 额定电压 / 电流 Rated Voltage/Current | 10(4)A, 125, 250VAC/6(2)A, 380VAC Forinductance Load, Cosφ=0.4 |
| 接触电阻 Contact Resistance | 25m Ω max. (initial value) |
| 绝缘电阻 Insultation Resistance | 100m Ω min.(at 500VDC) |
| 电介强度 Dielectric Strength | 1000VAC, 50/60 Hz for 1 minute between terminals of the same polaritg |
| | 电气寿命 Electrical Life |
| | 机械寿命 Mechanical Life |
| 电气寿命 Electrical Life | 500,000 at 10A 250VAC Resistive |
| 机械寿命 Mechanical Life | 10,000,000 operations min.(under rated conditions) |
| 操作速度 Operating Speed | 5mm/s to 0.5m/s |
| 防水防尘能力 Degree of Protection | IP65 |
| 上升温度 Ambient Temperature Rised | Max 30℃ over ambient temperature at rated voltage/current |
| 合乎标准 Conformed Standards | Cenelec EN 50041, EN 50047, IEC 337-1, VDE 0660 |
| 操作温度 Operating Temperature | -5℃ ~+65℃ (with no icing) |
| 保存温度 Storage Temperature | -5℃ ~+65℃ (with no icing) |
| 湿度 Ambient Operating Humditg | 95% RH Max. |
| 冲击系数 Shock Resistance | Mechanicaldurable: 1000m/s2, min |
| | 其他螺丝扭力 Other Screw Torsional Force |
| 振动频率 Vibration Frequencg | Malfunction: 10 t0 55Hz, 1.5mm double amplitude |
| 端子螺丝扭力 Terminal Screw Torsional Force | 6-8 kgf-cm |
| 其他螺丝扭力 Other Screw Torsional Force | Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf/cm |
| 裸铜线尺寸 Bare Wire Diameter | Φ2 Max |
| 电缆尺寸 Cable Diameter | Φ12 Max |

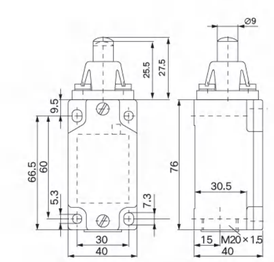
注：带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
Note: Product with spring, its usoble ronge of operating part is within one third of the whole spring length from the front end of spring



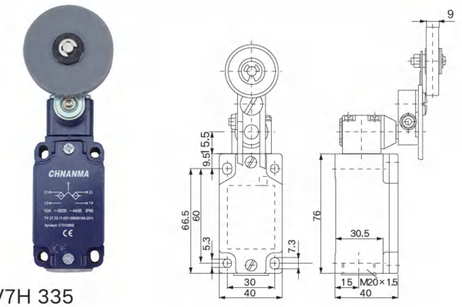


## 行程开关系列 TRAVEL SWITCH

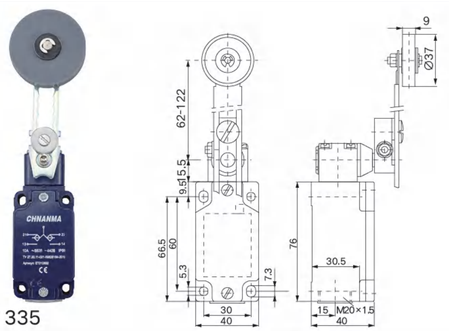
ZS 335-11Z




Z4V7H 335




Z4V7 335

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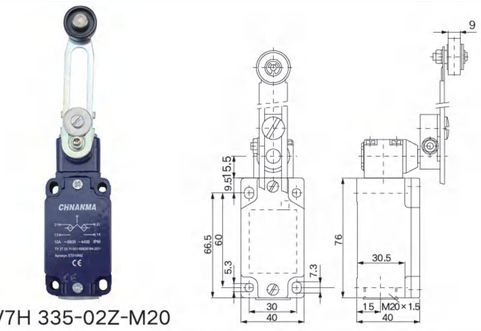


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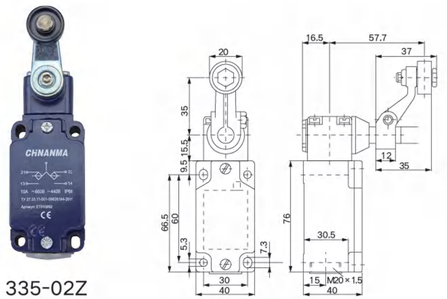


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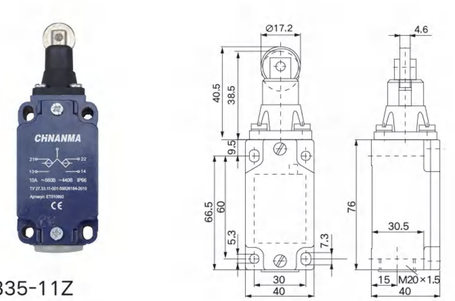


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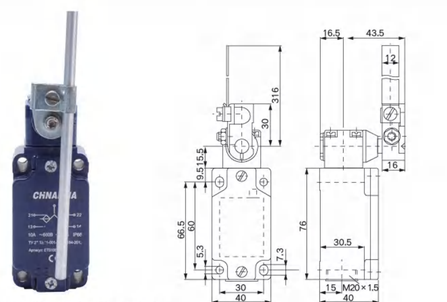


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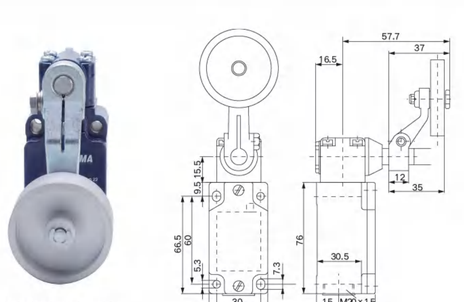


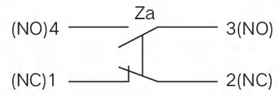


# Z4V 塑料型行程开关
Plastic type travel switch

## 特点 Features

- ◎ 经济塑料型
- ◎ 不锈钢滚轮，冲头及弹簧
- ◎ 特大 ±95 ° 摇管摆幅
- ◎ 导管连接器尺寸标配 M20×1.5
- ◎ Economical & plastic tgpe
- ◎ Stainless steel roller, punch and spring
- ◎ Swing amplitude, extra large ± 95 °
- ◎ M20x1.5 cable gland that can be equipped

## 接触形式 Contact form




## 规格 Specifications

| | |
|---|---|
| 双断开机械功用 Double Break Mechanism | INO+INC Force Break snap action 强迫断开快速机芯 |
| 额定电压 / 电流 Rated Voltage/Current | 10(4)A, 125, 250VAC/6(2)A, 380VAC Forinductance Load, Cosφ=0.4 |
| 接触电阻 Contact Resistance | 25m Ω max. (initial value) |
| 绝缘电阻 Insultation Resistance | 100m Ω min.(at 500VDC) |
| 电介强度 Dielectric Strength | 1000VAC, 50/60 Hz for 1 minute between terminals of the same polaritg |
| | 电气寿命 Electrical Life |
| | 机械寿命 Mechanical Life |
| 电气寿命 Electrical Life | 500,000 at 10A 250VAC Resistive |
| 机械寿命 Mechanical Life | 10,000,000 operations min.(under rated conditions) |
| 操作速度 Operating Speed | 5mm/s to 0.5m/s |
| 防水防尘能力 Degree of Protection | IP65 |
| 上升温度 Ambient Temperature Rised | Max 30℃ over ambient temperature at rated voltage/current |
| 合乎标准 Conformed Standards | Cenelec EN 50041, EN 50047, IEC 337-1, VDE 0660 |
| 操作温度 Operating Temperature | -5℃ ~+65℃ (with no icing) |
| 保存温度 Storage Temperature | -5℃ ~+65℃ (with no icing) |
| 湿度 Ambient Operating Humditg | 95% RH Max. |
| 冲击系数 Shock Resistance | Mechanicaldurable: 1000m/s2, min |
| | 其他螺丝扭力 Other Screw Torsional Force |
| 振动频率 Vibration Frequencg | Malfunction: 10 t0 55Hz, 1.5mm double amplitude |
| 端子螺丝扭力 Terminal Screw Torsional Force | 6-8 kgf-cm |
| 其他螺丝扭力 Other Screw Torsional Force | Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf/cm |
| 裸铜线尺寸 Bare Wire Diameter | Φ2 Max |
| 电缆尺寸 Cable Diameter | Φ12 Max |

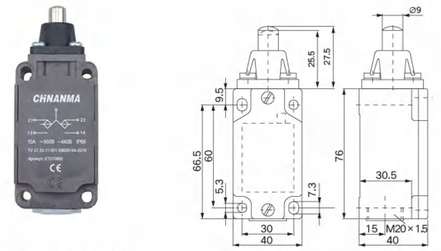
注：带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
Note: Product with spring, its usoble ronge of operating part is within one third of the whole spring length from the front end of spring





## 行程开关系列 TRAVEL SWITCH

TS 336-11Z-M20



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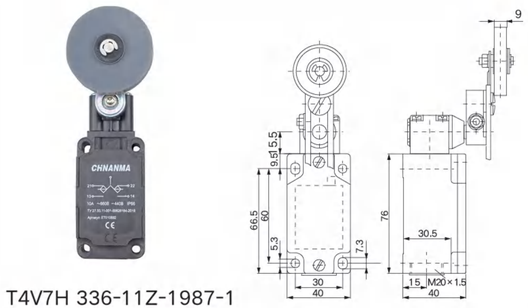

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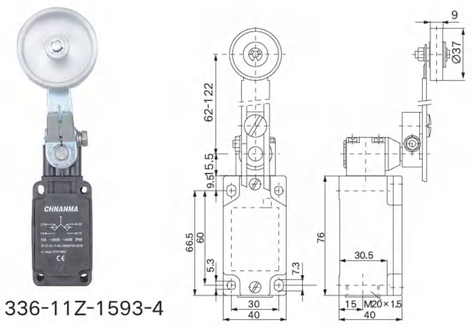

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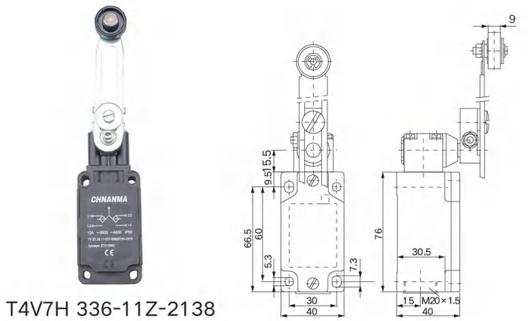

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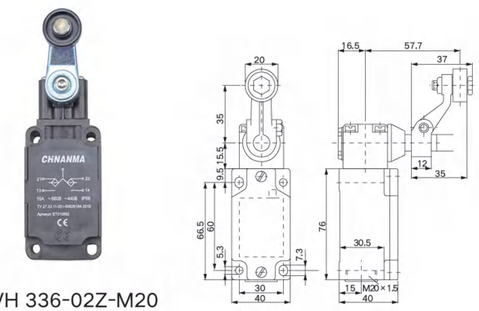

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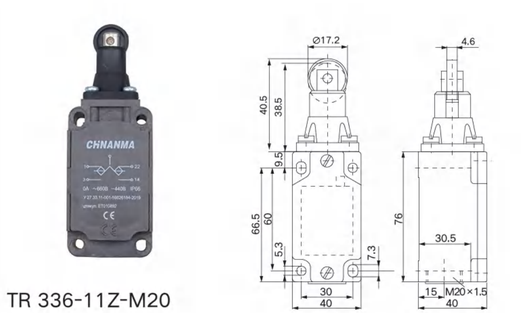
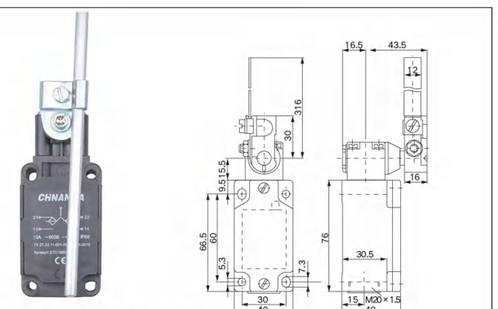
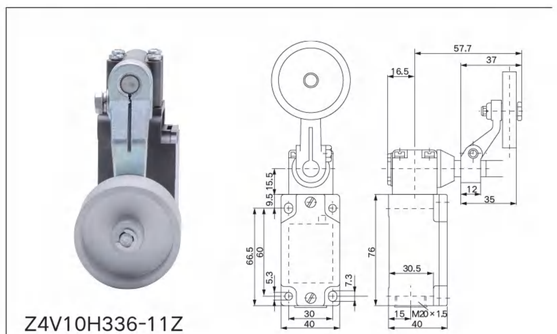


T4V10H 336-11Z-M20



Z4V10H336-11Z



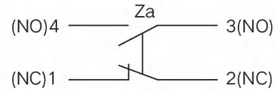



# ZS/ZK 金属型行程开关
Metal type travel switch

## 特点 Features

- ◎ 经济金属型
- ◎ 不锈钢滚轮，冲头及弹簧
- ◎ 特大 ±95 ° 摇管摆幅
- ◎ 导管连接器尺寸标配 M20×1.5
- ◎ Economic metal type
- ◎ Stainless steel roller, punch and spring
- ◎ Swing amplitude, extra large ± 95 °
- ◎ M20x1.5 cable gland that can be equipped

## 接触形式 Contact form




## 规格 Specifications

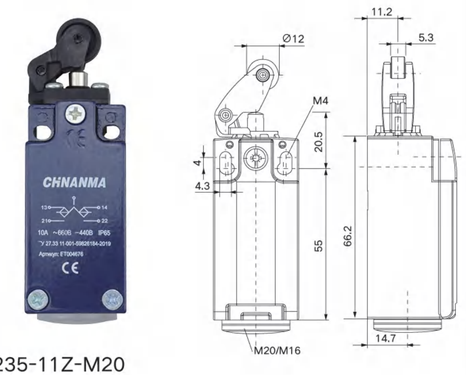
| | |
|---|---|
| 双断开机械功用 Double Break Mechanism | INO+INC Force Break snap action 强迫断开快速机芯 |
| 额定电压 / 电流 Rated Voltage/Current | 10(4)A, 125, 250VAC/6(2)A, 380VAC Forinductance Load, Cosφ=0.4 |
| 接触电阻 Contact Resistance | 25m Ω max. (initial value) |
| 绝缘电阻 Insultation Resistance | 100m Ω min.(at 500VDC) |
| 电介强度 Dielectric Strength | 1000VAC, 50/60 Hz for 1 minute between terminals of the same polaritg |
| | 电气寿命 Electrical Life |
| | 机械寿命 Mechanical Life |
| 电气寿命 Electrical Life | 500,000 at 10A 250VAC Resistive |
| 机械寿命 Mechanical Life | 10,000,000 operations min.(under rated conditions) |
| 操作速度 Operating Speed | 5mm/s to 0.5m/s |
| 防水防尘能力 Degree of Protection | IP65 |
| 上升温度 Ambient Temperature Rised | Max 30℃ over ambient temperature at rated voltage/current |
| 合乎标准 Conformed Standards | Cenelec EN 50041, EN 50047, IEC 337-1, VDE 0660 |
| 操作温度 Operating Temperature | -5℃ ~+65℃ (with no icing) |
| 保存温度 Storage Temperature | -5℃ ~+65℃ (with no icing) |
| 湿度 Ambient Operating Humditg | 95% RH Max. |
| 冲击系数 Shock Resistance | Mechanicaldurable: 1000m/s2, min |
| | 其他螺丝扭力 Other Screw Torsional Force |
| 振动频率 Vibration Frequencg | Malfunction: 10 t0 55Hz, 1.5mm double amplitude |
| 端子螺丝扭力 Terminal Screw Torsional Force | 6-8 kgf-cm |
| 其他螺丝扭力 Other Screw Torsional Force | Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf/cm |
| 裸铜线尺寸 Bare Wire Diameter | Φ2 Max |
| 电缆尺寸 Cable Diameter | Φ12 Max |

注：带弹簧系列产品，操作体的使用范围为从弹簧的前端到弹簧全长的 1/3 以内。
Note: Product with spring, its usoble ronge of operating part is within one third of the whole spring length from the front end of spring

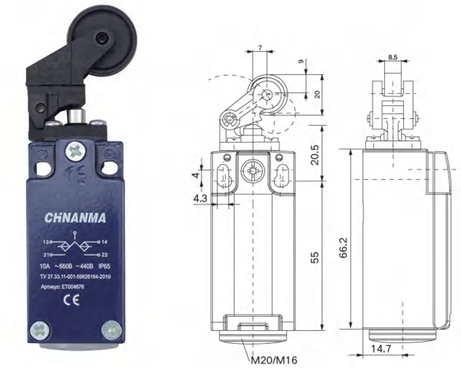




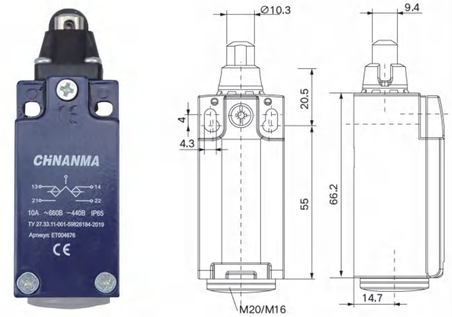
## 行程开关系列 TRAVEL SWITCH




Z1R 235-11Z-M20




ZK 235-11Z-M20

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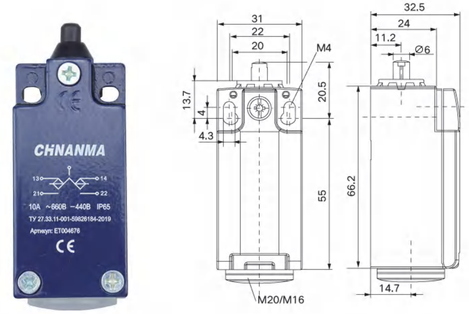
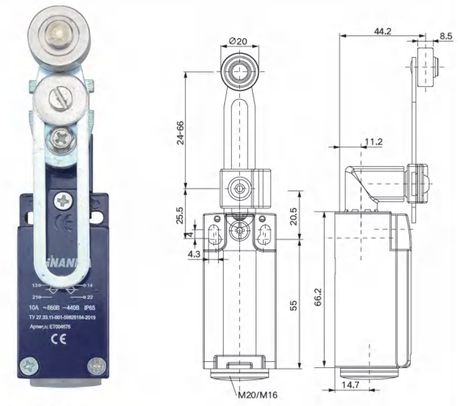
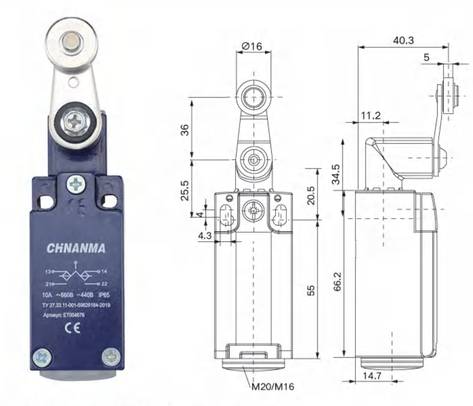



ZS 235-11Z-M20




ZV4H 235-11Z




ZV14H 235-11ZZ-RMS-U90

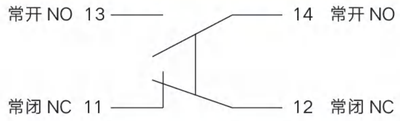



# HL 行程开关 Limit Switch

## 特征 FEATURE

◎ 金属底壳
◎ 不锈钢滚轮，冲头及弹簧
◎ 高电型 10A 250V 50 万次
◎ Metallice bottom shell
◎ Stanless steel roller,punch and spring
◎ Strong electric proporty 10A 250V for 500,000 times

## 接点型式 Contact Form




## 规格 /Specification

| | | |
|---|---|---|
| 防护等级 Protection | | I P65 |
| 寿命 life | 机械的 Mechaniac | 1,000 万次以上 Ten milion times above |
| | 电气的 Elratrical | 电气的寿命曲线 Electric life curve 5mm~0.5m/sl |
| 操作速度 Operation speed | | 5mm~0.5m/sl |
| 操作频率 Operation frequentcy | 机械的 Mechaniac | 120 次 / 分 120times/m |
| | 电气的 Elratrical | 30 次 / 分 30tiems/m |
| 绝缘电阻 Insulation resistance | | 100MΩ DC500V |
| 接触电阻 Contact resistance | | <25mΩ |
| 耐高压 With stand voltage (50/60Hz 1 分钟 ) | 同极端子间 Between theterminals of same pole | AC1,000V |
| | 充电金属部间 Between charged metal parts | AC1,500V |
| | 各端子非充电金属部间 Between charged metal parts each terminal | AC1,000V |
| 振动 Vibration | 误动作 Misoperation | 10~15Hz 复振幅 1.5mm 10~15Hz amplitude 1.5mm |
| 负荷 Load | | AC 250V 5A |
| | | AC 380V 5A |
| | | AC 125V 3A |
| | | AC 250V 3A |

## 工作特性 /Operating Characteristics

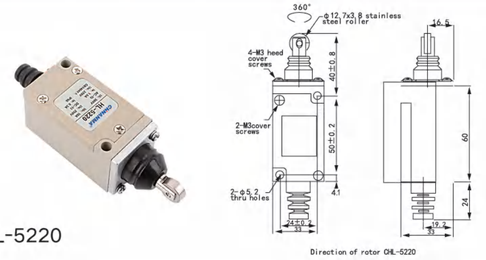
| 型号 Model | HL-5000 | HL-5030 | HL-5050 | HL-5100 | HL-5200 | HL-5220 | HL-5300 | HL-5330 | HL-5381 | HL-5391 |
|---|---|---|---|---|---|---|---|---|---|---|
| OF 最大 (Max) | 750g-cm | 750g-cm | 750g-cm | 750g-cm | 900g-cm | 900g-cm | 150g | 150g | 150g | 550g-cm |
| RF 最小 (Min) | 100g-cm | 100g-cm | 100g-cm | 200g | 200g | 200g | 30g | 30g | 30g | 100g-cm |
| PT 最大 (Max) | 20 ° | 20 ° | 20 ° | 1.8mm | 1.8mm | 1.8mm | 30mm | 30mm | 30mm | 20 ° |
| OT 最小 (Min) | 22.5 ° | 22.5 ° | 22.5 ° | 2.0mm | 2.0mm | 2.0mm | 22.5 ° | 22.5 ° | 22.5 ° | 22.5 ° |
| MD 最大 (Max) | 10 ° | 10 ° | 10 ° | 1.2mm | 1.2mm | 1.2mm | 14 ° | 14 ° | 14 ° | 14 ° |
| EP 最大 (Max) | 75 ° | 75 ° | 75 ° | 4.0mm | 4.0mm | 4.0mm | 20mm | 20mm | 20mm | 75 ° |
| OP(mm) | 95 ° | 95 ° | 95 ° | 5.8mm | 5.8mm | 5.8mm | 50mm | 50mm | 50mm | 95 ° |



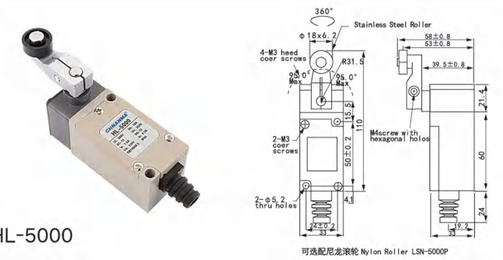


## HL 立式限位开关 Vertical Limit Switch

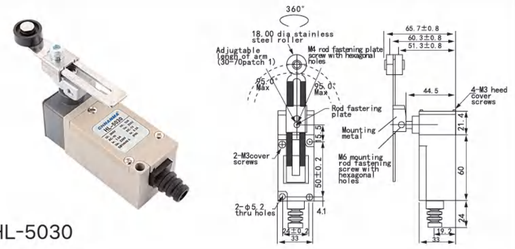
HL-5220



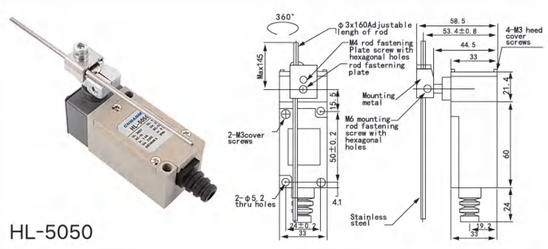

HL-5000



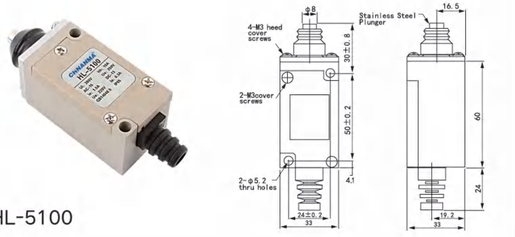

HL-5030



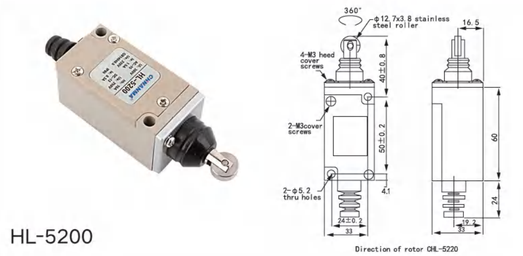

HL-5050




HL-5100




HL-5200

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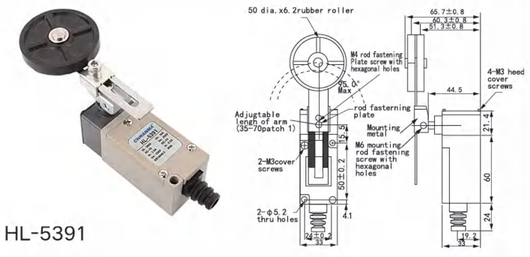
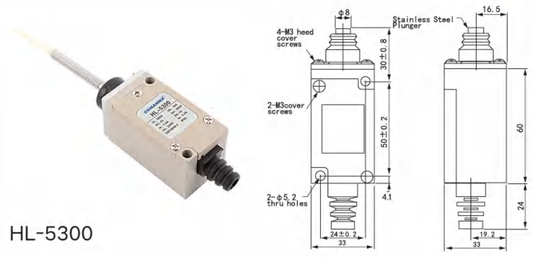
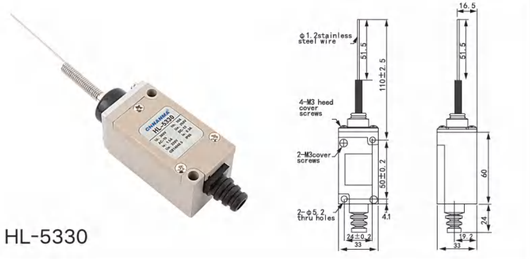


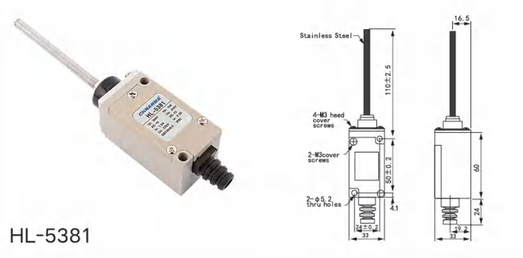

HL-5300




HL-5330




HL-5381



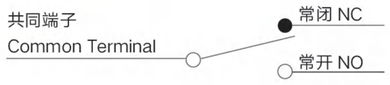



# FS 脚踏开关 Foot Switch

## 特点 Features

◎ 塑料外壳与金属外壳可供选择
◎ Plastic shell and metal shell are for selection

## 接点型式 Contact Form




## 规格 Specifications

| 种类 Designation | 型式 Model | 负荷 Rating | 微动开关形式 Type of switch enclosed & contact arrangement | 电缆种类 / 长度 Cable type / length | 接点 Cantact | 动作压力 Action force | 外壳材质 Material of Rind |
|---|---|---|---|---|---|---|---|
| 标准型 复归式 Standard type Momentary Action | FS-101 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 1.2kg | 塑胶 Plastic |
| | FS-2 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 1.1kg | 铝合金 Aluminum Cast |
| | FS-3 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 1.2kg | |
| | FS-3S | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 1.1kg | |
| 小型附 回定片 Mini foot switch Front end push | FS-201 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 0.7kg | 塑胶 Plastic |
| | FS-01 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 0.7kg | |
| | FS-1 | 16A 250VAC | V-16-1C25 | 0.5mm2，20cm~2m | 1A1B | 0.9kg | 铁壳 Iron |
| 护盖型 Protective guard foot switch | FS-302 | 15A 250VAC | TM-1704 | 附电缆固定头，不附电缆 Accessory: Cable gland (No cable) | 1A1B | 3.2kg | 铝合金 Aluminum Cast |
| | FS-502 | 15A 250VAC | TM-1704 | | 1A1B | 3.2kg | |
| | FS-602 | 15A 250VAC | TM-1704 | | 2*1A1B | 2.8kg | |
| 大型 Large type | FS-402 | 15A 250VAC | 按钮弹簧式 Button spring type | | 1A1B | 3.2kg | |

注：导管连接器尺寸常规默认为 M20x1.5，配电缆接头；导管连接器尺寸 PG13.5，型号加 (-P)，例：FS-302-P。
The default size of conduit connector is M20x1.5, outfiting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:FS-302-P.

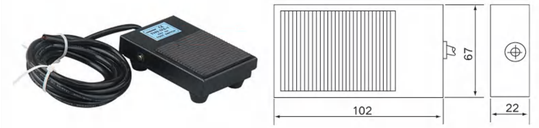




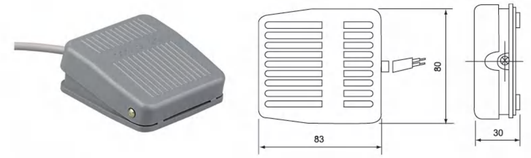
## 脚踏开关系列 FOOT SWITCH



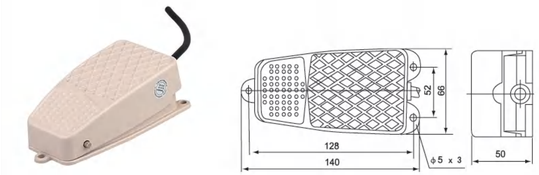

FS-01



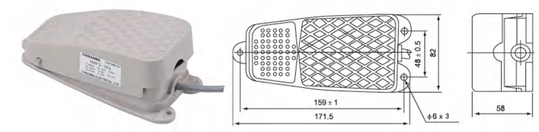

TFS-1



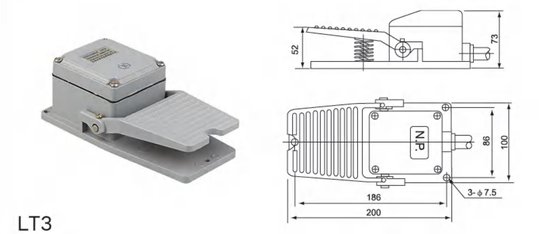

FS-201



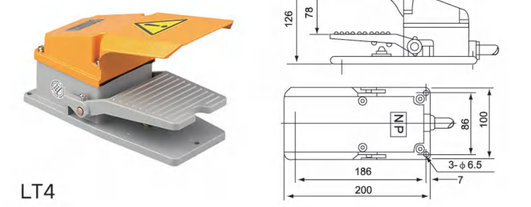

FS-2




FS-3




LT3

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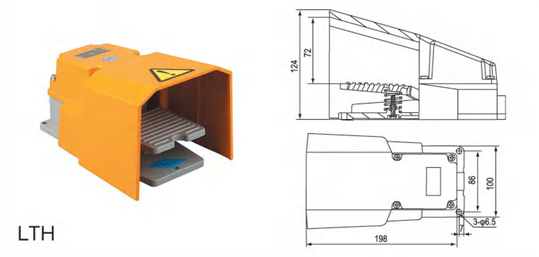
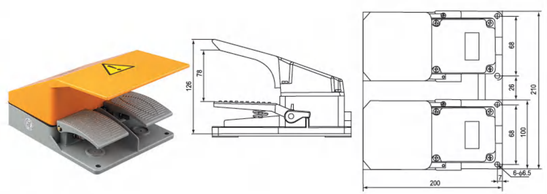



LTH

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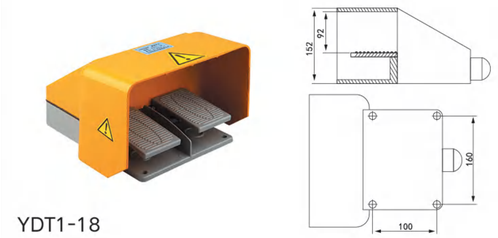
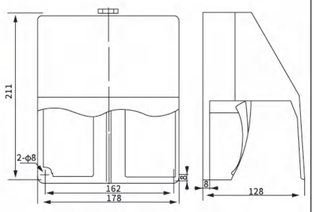



YDT1-18

## 脚踏开关系列 FOOT SWITCH

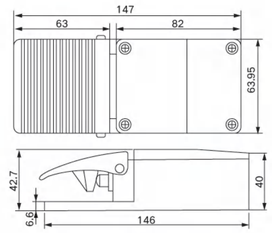
YDT1-16





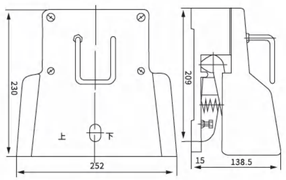

YDT1-17





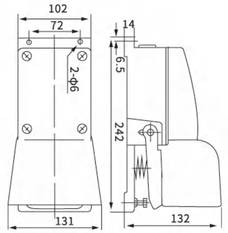

YDT1-14





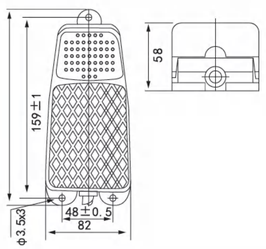

YDT1-11





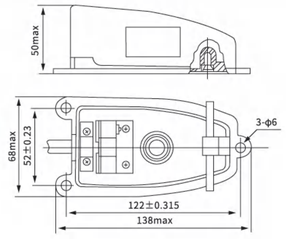

FS-101 102 105





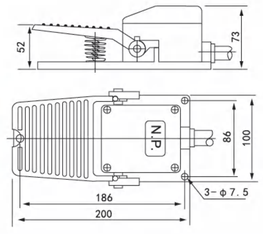

EKW-5A-B





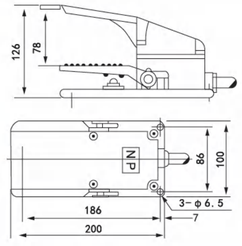

FS-402





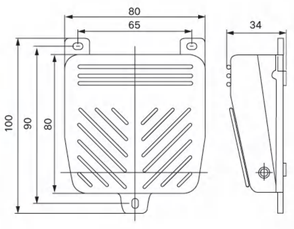

FS-302





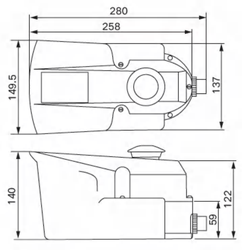

FS-201M2






FS-502/F





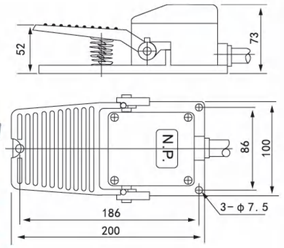





## 加厚脚踏开关系列 Thickened foot switch series

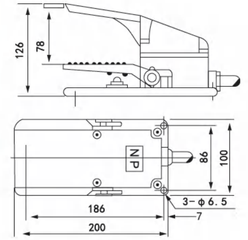
NMFS-402B





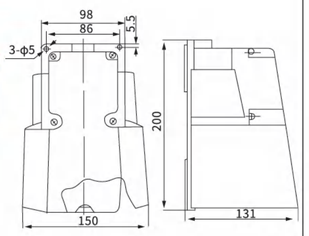

NMFS-302B





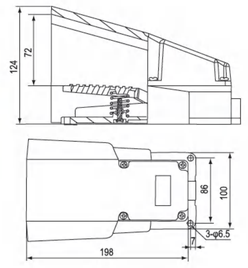

NMFS-502B





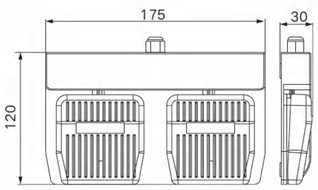

YDT1-88





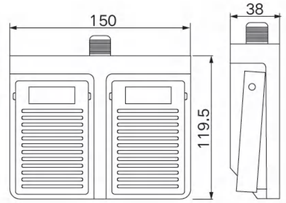

FS-201 双联 Double wheel





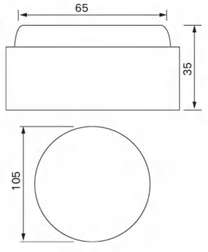

FS-201 双联 Double wheel





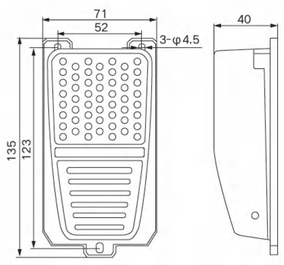

TFS-8017



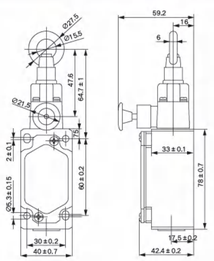



FS-5

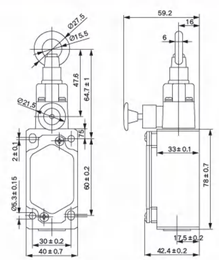




## 拉绳跑偏开关系列 PULL CORD SWITCH

SN4170-SL-C

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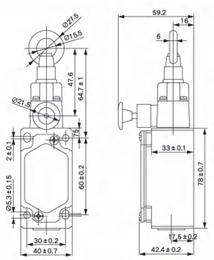
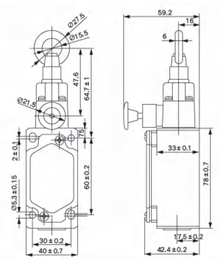
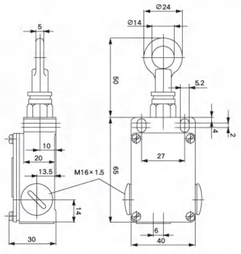


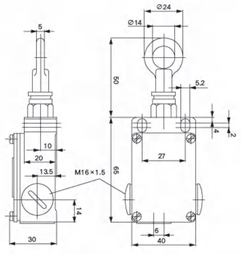
SN6170-SL-C

NM6170-SL-C-R

ES41Z10-1S

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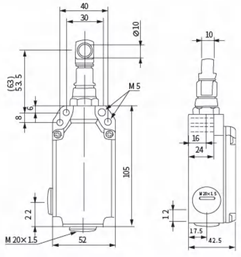
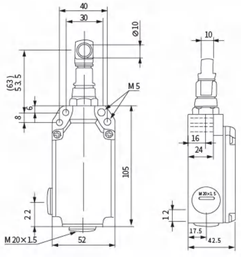
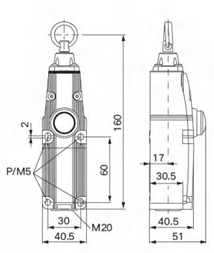


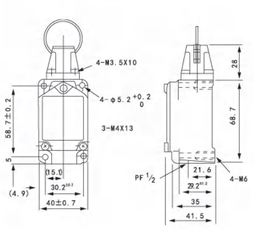
LS-LX-Z

LS-LX-S

TQ700-11

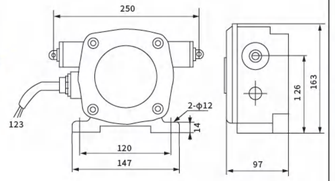



WL D202





## 拉绳跑偏开关系列 PULL CORD SWITCH　交流极限开关 Ac limit switch

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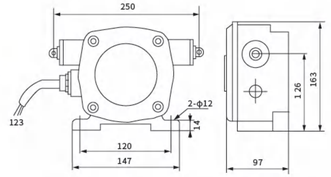
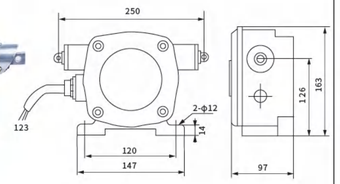
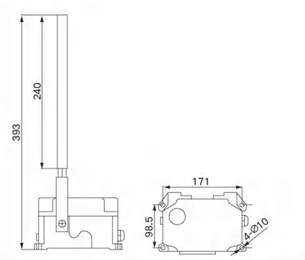


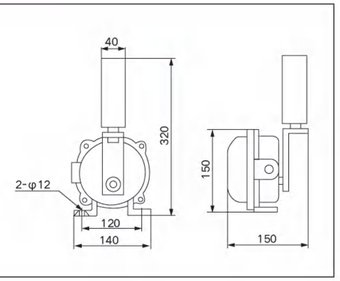
HFKLT2-11

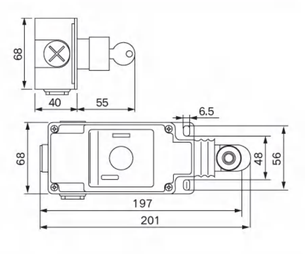
KLT2-1

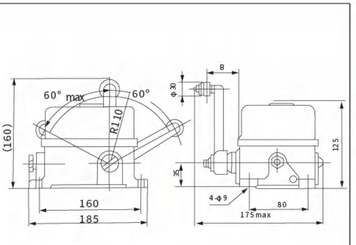
PLQ-R

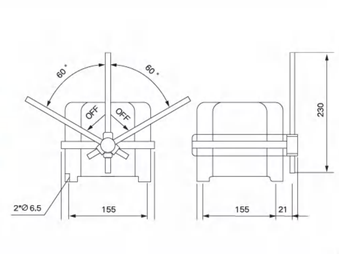
HFKPT1-12-30

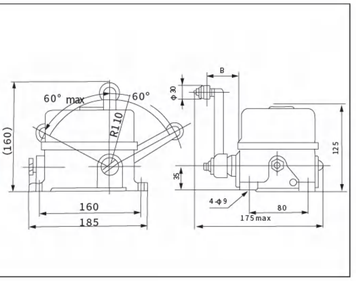
XY2-CH

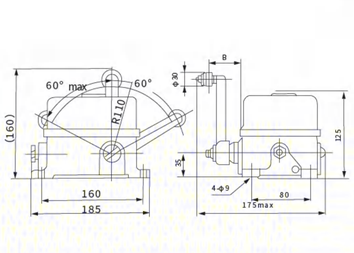
JK16-100

JK18-125

DF1-A

DF1-B

CHNANMA®




# LXW20 NMCSK 普通式直流磁吹式微动开关

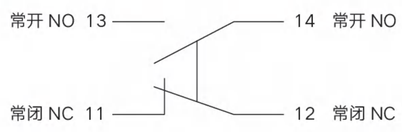
Ordinary DC Magnetic Blowing Micro Switch

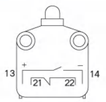
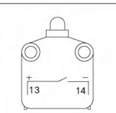
## 型号说明 Model Number Structure

LX ① W ② 20 ③ - □ ④ □ ⑤

| 项目 Item | 代号 Code | 说明 Description |
|---|---|---|
| ① 种类开关 Type switch | LX | 主令行程开关 Master stroke switch |
| ②种类开关 Type switch | W | 微动开关 Micro Switch |
| ③设计代号 Design code | 20 | 阿拉伯数字 Arabic numerals |
| ④基本规格代号 Basic specification code | 11 | 常开 + 常闭 NO+NC |
| | 01 | 常闭 NC |
| | 10 | 常开 NO |
| ⑤派生规格号 Derived specification number | M | 磁吹灭弧装置 Magnetic arc blowing device |

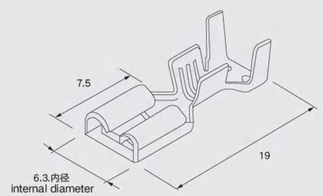
## 接点型式 Contact Form




| 示意图 Sketch Map | 型号 model | 磁吹装置 Magnetic blowing device | 接触方式 Contact mode |
|---|---|---|---|
|  | LXW20-11 | — | 一开一闭 Open and close |
| | LXW20-11M | ◯ | |
|  | LXW20-01 | — | 一常闭 One normally closed |
| | LXW20-01M | ◯ | |
|  | LXW20-10 | — | 一常开 One normally open |
| | LXW20-10M | ◯ | |

冷压端子

cold pressed terminal




## 动作特性 Operating Characteristics

| 型式 Models | LXW20 | LXW20-11 | LXW20-11M |
|---|---|---|---|
| 操作力 Operating force | OF 最大 (Max.) | 3.5N | 3.5N |
| 回弹力 Release force | RF 最小 (Min.) | 0.8N | 0.8N |
| 预行程 Pre-travel | PT 最大 (Max.) | 2.5 ± 0.8mm | 2.5 ± 0.8mm |
| 过行程 Over travel | OT 最小 (Min.) | 3mm | 3mm |
| 响应差的行程 Stroke with poor response | MD 最大 (Max.) | 1.6mm | 1.6mm |





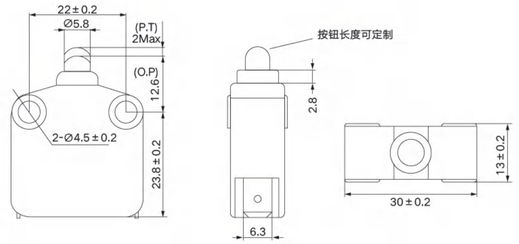
## 外观和尺寸 Appearance and Dimension

LXW20-11
普通式 ( 新款 )
Swing rod type(New)






抗冲击台阶
Impact step

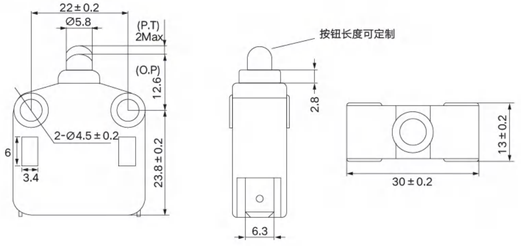



LXW20-11M
磁吹式 ( 新款 )
Ordinary type(New)






抗冲击台阶
Impact step

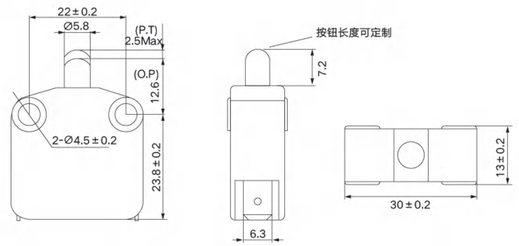



LXW20-11
普通式
Swing rod type






无台阶
stepless

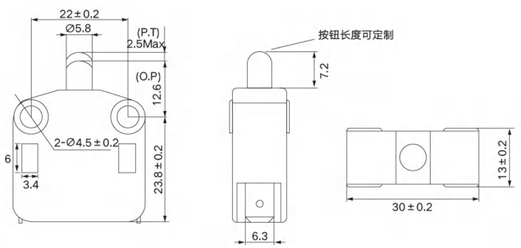



LXW20-11M
磁吹式
Ordinary type






无台阶
stepless




注：按钮标准长度为 8MM，如需加长可咨询本公司订制。
The standard length of the button is 8mm. If you need to lengthen it, you can consult our company for customization.

CHNANMA®




# CSK11-A NMCSK11-A 型磁吹开关 Magnetic Blowback Switch

## 使用说明 Instructions for use

CSK-1-11 开关适用于控制各种高压开关操作机构的合闸、分闸、开关锁、信号回路等二次回路之用。该开关由外壳、滑轮组、钢动机构、常开、闭触头组组成。

CSK-1-11 系列开关适用于交流 50Hz，额定工作电压 AC380V，DC220V，额定工作电流 DC220V/5A AC380V/8A 的电路中。

The CSK-1-11 switch is suitable for controlling various high-voltage switch operating mechanisms for closing, breaking, switch locking, signaling circuits and other secondary circuits. The switch consists of shell, pulley set, steel moving mechanism, normally open and closed contact set.

CSK-1-11 series switches are suitable for use in circuits with AC 50Hz, rated operating voltage AC380V, DC220V, rated operating current DC220V/5A AC380V/8A.

## 特点 Features

◎ 开关内部的瞬动机构具有动作速度快、拉弧少、操作灵活、轻巧等优势。触头采用银基合金。

◎ 其特点是触点接触面积大、散热快，外壳材质为聚碳酸脂。其机械具有强度高、耐热、耐寒、抗老化和电气性能好等特点。

◎ The momentary mechanism inside the switch has the advantages of fast action, less arc pulling, flexible operation and light weight. The contacts are made of silver-based alloy.

◎ It is characterized by large contact area and fast heat dissipation of the contacts, and the shell material is polycarbonate. Its machinery is characterized by high strength, heat resistance, cold resistance, anti-aging and good electrical performance.

## 型号说明 Model Number Structure

CSK - 1 □ □
① ② ③ ④

| 代号 Code | 项目 Item |
|---|---|
| ① CSK | 磁吹开关 Magnetic Blowout Switch |
| ② 1 | 设计序号 Design number |
| ③□ | 通断形式：11 为 1 常开 1 常闭，22 为 2 常开 2 常闭<br>On-off form: 11 for 1 normally open 1 normally closed, 22 for 2 normally open 2 normally closed |
| ④□ | 不标识：常规型号；标 W：带延长支架<br>No marking: regular model; labeled W: with extension bracket |

## 规格 Specifications

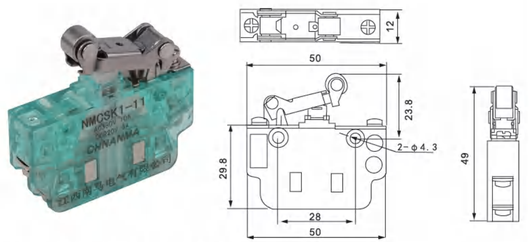
| 额定电压<br>Rated voltage | 额定电流<br>Rated current | 变形温度等级 Heat distortion temperature | 绝缘电阻<br>Insulation resistance | 耐电压<br>Withstand voltage | 接触电阻初期值<br>Initial contact resistance |
|---|---|---|---|---|---|
| DC 250V | 5A | ≤ 120℃ | ≥ 100MΩ | AC 1500V | ≤ 50mV |
| 动作力<br>OF | 回复力<br>RF | 动作行程<br>PT | 机械寿命<br>Mechanical life | 电气寿命<br>Electrical life | 端子扭力<br>Terminal resistance |
| ≥ 600g | ≥ 200g | 3mm ± 1mm | 100 万次 | 5 万次 | 1.2N |

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

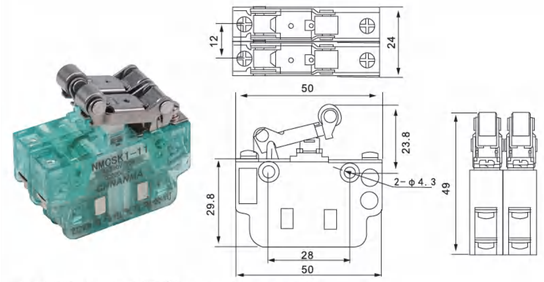




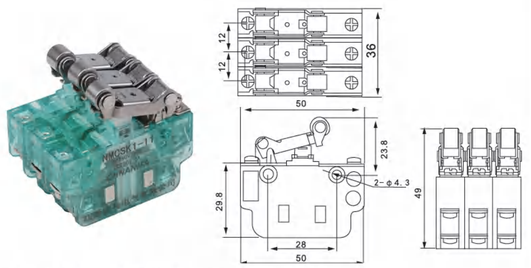
## 磁吹开关系列 MAGNETIC BLOW SWITCH



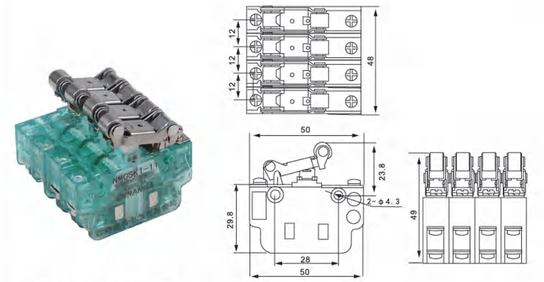

NMCSK1-11 单联 Single wheel



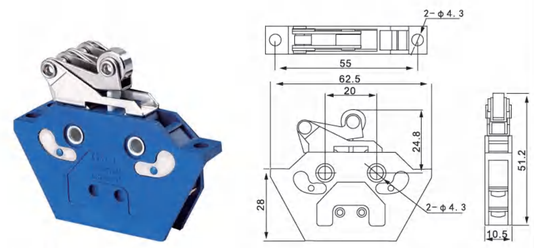

NMCSK1-22 双联 Double wheel



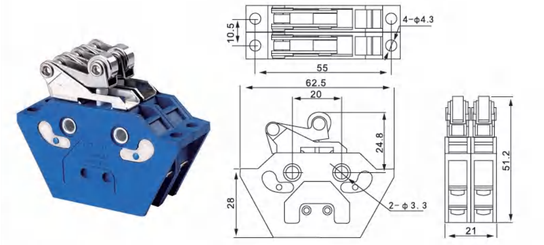

NMCSK1-33 三联 Three wheel



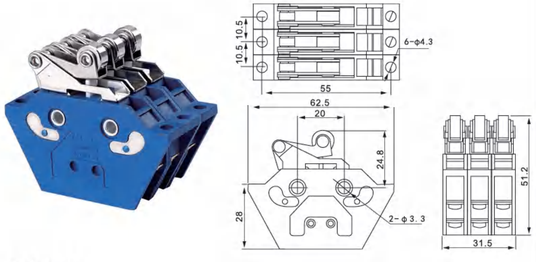

NMCSK1-22 四联 Four wheel



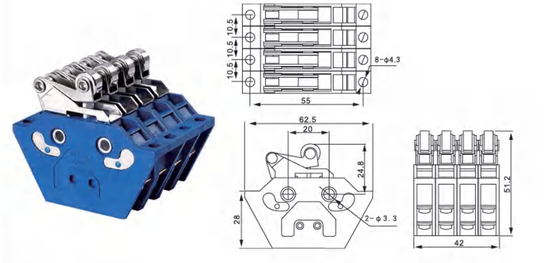

CSK-11




CSK-22

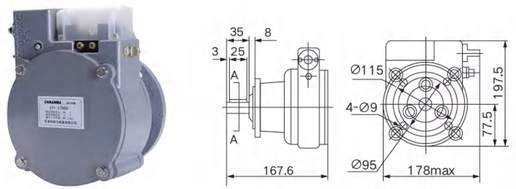



CSK-33



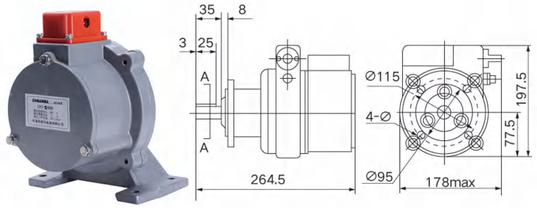

CSK-44

## 超速开关系列 Overspeed switch series



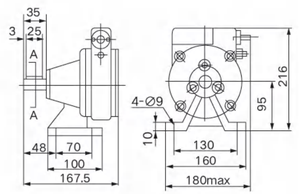


NMLY1-1/600.750.1000/D

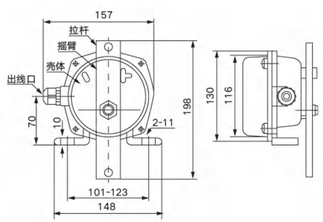




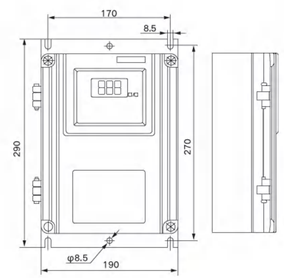
NMLY1G-2/600.750.1000/Z

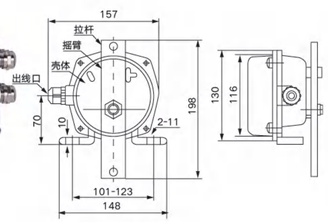

NMLY1-1/600.750.1000


HFKPT1-12-30/F

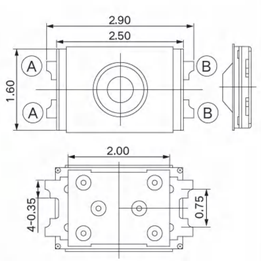




ZDH-V

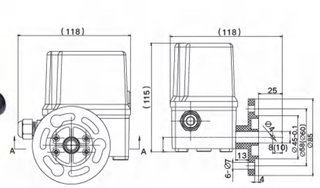




HFKLT2-II/F




微电脑超速开关 NMLY1-1/99
Microcomputer overspeed switch

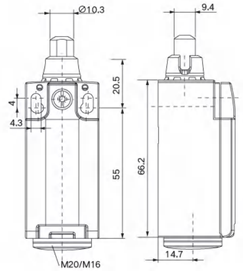




超速开关 NMDXZ-1:274CS 含编码器
Overspeed switch NMDXZ-1:274CS includes encoder

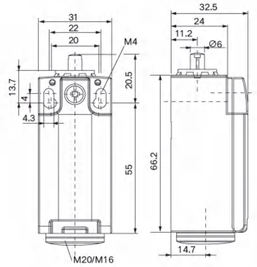




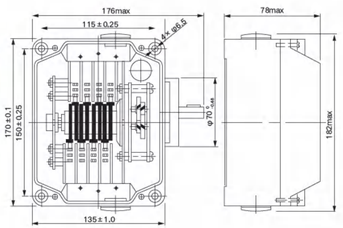
## 行程限位开关系列 Travel limit switch series　红外线防撞行程开关 Infrared anti-collision stroke switch

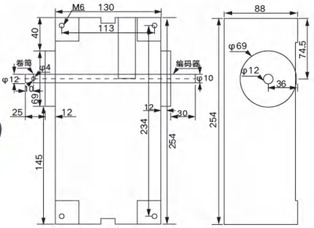

SND4111-SP-C-R

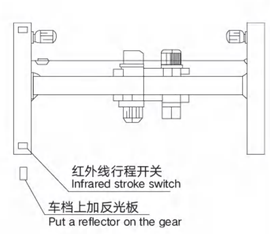

SND4111-SP-C

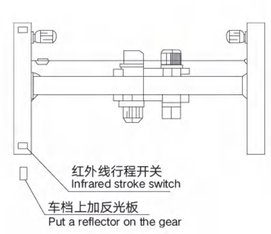

NMLX36-82/84/88

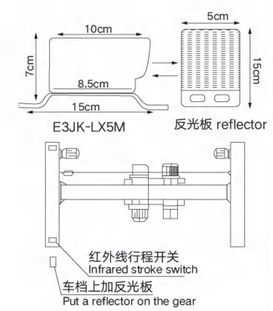

NMLX36-82/84/88/B

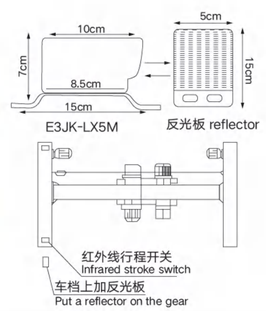

NM-YS73-R5F


NM-YS73-R5F


NME3LX-5M


NME3LX-5M



# LA38 按钮开关 Push button switch

## 产品特点 Product characteristics

・多种安装尺寸：提供 φ12mm、φ16mm、φ22mm、φ25mm、φ30mm 等多种安装尺寸，满足不同需求。
・ 多样化的按钮类型：包括复位按钮、自锁按钮、带灯按钮、蘑菇钮、旋钮、钥匙钮、急停钮等，适应不同的操作需求。
・ 触点自洁功能：具有触点自洁功能，确保接触可靠。
・ 耐用材料：零部件采用进口材料，坚固耐用，耐磨损。

・ Various mountingsizes ：Provide φ12mm, φ16mm, φ22mm, φ25mm, φ30mm and other mounting sizes to meet different needs. diversified button types ：including reset button, self-locking button, button with light, mushroom button, knob, key button, emergency stop button, etc., to adapt to different operation needs.
・contact self-cleaning function ：with contact self-cleaning function to ensure reliable contact.
・Durable material ：The parts are made of imported materials, durable and wear-resistant.

## 型号说明 Model Number Structure

LA38 - ⊙ ■ □ ▲ ○ △

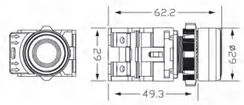
| LA38- | ⊙ | ■ | □ | -▲ | -○ | △ |
|---|---|---|---|---|---|---|
| 系列号 serial number | 触点类型 Contact type | 操作类型 Operation type | 选择开关位置 Select switch position | 需求功能 Function | 颜色 color | 灯电压 Lamp voltag |
| | 01:1NC<br>10:1NO<br>02:2NC<br>20:2NO<br>11: 1NO1NC<br>22:11+11<br>03:02+01<br>30:20+10<br>04:02+02<br>40:20+20<br>12:11+01<br>21:11+10<br>13:11+02<br>31:11+20<br>常开常闭触点根据需要组合<br>NO/NC contact combinations based on needs. | PN: 自复平钮<br>PN: Self-reset flat button<br>PNZS: 自锁平钮<br>PNZS: Self-locking flat button<br>PND: 带灯自复平钮<br>PND: Illuminated self-rest flat button<br>PNDZS: 带灯自锁平钮<br>PNDZS: Illuminated self-locking flat button<br>GN: 自复高钮<br>GN: Self-reset high button<br>GNZS: 自锁高钮<br>GNZS: Self-locking high button<br>GND: 带灯自复高钮<br>GND: Illuminated self-reset high button<br>GNDZS: 带灯自锁高钮<br>GNDZS: Illuminated self-locking high button<br>S: 不锈钢头自复平钮<br>S: Stainless steel self-reset flat button<br>SZS: 不锈钢头自锁平钮<br>SZS:Stainless steel self-locking flat button<br>SD: 带灯不锈钢头自复平钮<br>SD: luminated stainless steel self-reset flat button<br>SDZS: 带灯不锈钢头自锁平钮<br>SDZS: Illuminated stainless steel self-locking flat button<br>M40/60: 蘑菇头自复按钮<br>M40/60: Mushroom self-reset button<br>MZS40/60: 蘑菇头自锁按钮<br>MZS40/60: Mushroom self-locking button<br>MD40/60: 带灯蘑菇头自复按钮<br>MD40/60: Illuminated mushroom self-reset button<br>MDZS40/60: 带灯蘑菇头自锁按钮<br>MDZS40/60: Illuminated mushroom self-locking button<br>ZS40/60: 急停钮<br>ZS40/60: E-Stop button<br>ZSD40/60: 带灯急停钮<br>ZSD40/60: Illuminated E-stop button<br>X: 旋钮<br>X: Knob<br>XC: 长旋钮<br>XC: Long knob<br>XD: 带灯旋钮<br>XD: Illuminated knob<br>Y: 钥匙钮<br>Y: Key button<br>PNSW: 双位平钮<br>PNSW: Twin flat pushbutton<br>PNDSW: 带灯双位平钮<br>PNDSW: Illuminated flat button<br>GNSW: 双位高钮<br>GNSW: Twin high pushbutton<br>GNDSW: 带灯双位高钮<br>GNDSW: Illuminated twin high pushbutton | 21: 二位保持式<br>21:Two-position holding type<br>22: 二位自复式<br>22:Two-position self-reset type<br>31: 三位保持式<br>31: Three-position holding type<br>32: 三位左保持右自复式<br>32:Three-position left-holding and right-self-reset type<br>33: 三位自复式<br>33: Three-position self-reset type | Q: 喷漆塑头部和 I 型中座<br>Q: Painted plastci head & type I middle<br>C: 塑胶头部和 I 型中座<br>C: Plastic head & type I middle<br>L: 铝材头部和 I 型中座<br>L: Alumimum head & Type I middle<br>S: 不锈钢头部和 I 型中座<br>S: Stainless steel head & Type I middle<br>FH1:" ↓ " 定制符号<br>FH1: " ↓ "custom code<br>FH2:"O" 定制符号<br>FH2: "O" custom code<br>FH3:"- " 定制符号<br>FH3:"- " custom code<br>FH4:"= " 定制符号<br>FH4:"= " custom code<br>FH5:" 启动 " 定制符号<br>FH5:"START" custom code<br>FH6:"STOP" 定制符号<br>FH6: "STOP" custom code<br>IP65: 定制防水按钮<br>IP65: Custom IP65button<br>K: 抗干扰带灯按钮<br>K: Anti-interference illuminated button | 部分型号可选颜色详见产品选型 / 带灯产品无黑色<br>For the optional colors of some types,please refer to product selection (illuminated product without black) | AC/DC 6V<br>AC/DC 12V<br>AC/DC 24V<br>AC/DC 36V<br>AC/DC 48V<br>AC/DC 110V<br>AC/DC 220V<br>AC/DC 380V<br>AC 110V<br>AC 220V<br>AC380V |

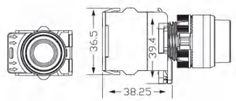
上述表格为型号解释说明，部分型号组合无实际产品，具体见产品选型或咨询厂商。
The above table is an explanatory note for models, some model combinations without actual products, see product selection or consult the manufacturer.

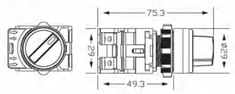


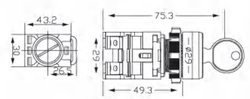


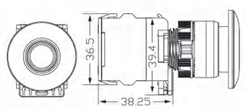
## LA38 按钮开关 LA38 Push button switch

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 平头按钮 Flush push button switch | LA38-B1-10 | G R Y B W K | NO - |  |
| | | LA38-B1-01 | | - NC | |
| | | LA38-B1-11 | | 1NO 1NC | |
| | 平头自锁按钮 Flush maintained push button switch | LA38-B1-20T | | 2NO - | |
| | | LA38-B1-02T | | - 2NC | |
| | | LA38-B1-22T | | 2NO 2NC | |

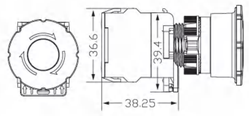
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 高位按钮 Extended push button switch | LA38-B1-10H | G R Y B W K | NO - |  |
| | | LA38-B1-01H | | - NC | |
| | | LA38-B1-11H | | 1NO 1NC | |
| | 高位自锁按钮 Extended maintained push button switch | LA38-B1-20HT | | 2NO - | |
| | | LA38-B1-02HT | | - 2NC | |
| | | LA38-B1-22HT | | 2NO 2NC | |

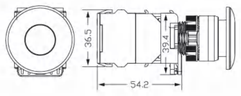
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 二位选择开关 2 position selector switch | LA38-B1-10X | | NO - |  |
| | | LA38-B1-01X | | - NC | |
| | | LA38-B1-11X | | 1NO 1NC | |
| | 三位选择开关 3 position selector switch | LA38-B1-20XS | | 2NO - | |
| | | LA38-B1-02XS | | - 2NC | |
| | | LA38-B1-22XS | | 2NO 2NC | |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 二位钥匙选择开关 2 position key selector switch | LA38-B1-10Y | | NO - |  |
| | | LA38-B1-01Y | | - NC | |
| | | LA38-B1-11Y | | 1NO 1NC | |
| | 三位钥匙选择开关 3 position key selector switch | LA38-B1-20YS | | 2NO - | |
| | | LA38-B1-02YS | | - 2NC | |
| | | LA38-B1-22YS | | 2NO 2NC | |

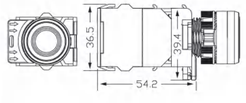
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 蘑菇头按钮 Mushroom push button switch | LA38-B1-10M | G R Y B W K | NO - |  |
| | | LA38-B1-01M | | - NC | |
| | | LA38-B1-11M | | 1NO 1NC | |
| | 蘑菇头自锁按钮 Mushroom maintained push button switch | LA38-B1-20MT | | 2NO - | |
| | | LA38-B1-02MT | | - 2NC | |
| | | LA38-B1-22MT | | 2NO 2NC | |

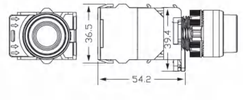
## LA38 按钮开关 LA38 Push button switch

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 急停按钮 Emergency stop switch | LA38-B1-01ZS | R | - NC |  |
| | | LA38-B1-11ZS | | 1NO 1NC | |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 带灯急停按钮 Illuminated emergency stop switch | LA38-B1-01ZSD | R | - NC |  |
| | | LA38-B1-11ZSD | | 1NO 1NC | |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 双键按钮 Double push button switch | LA38-B1-11R |  | 1NO 1NC |  |
| | | LA38-B1-22R | | 2NO 2NC | |
| | 带灯双键按钮 Illuminated double push button switch | LA38-B1-11RD |  | 1NO 1NC | |
| | | LA38-B1-22RD | | 2NO 2NC | |

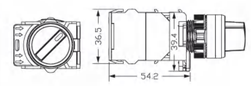
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 带灯按钮 Illuminated push button switch | LA38-B1-10D | G R Y B W | NO - |  |
| | | LA38-B1-01D | | - NC | |
| | | LA38-B1-11D | | 1NO 1NC | |
| | 带灯自锁按钮 Illuminated maintained push button switch | LA38-B1-20TD | | 2NO - | |
| | | LA38-B1-02TD | | - 2NC | |
| | | LA38-B1-22TD | | 2NO 2NC | |

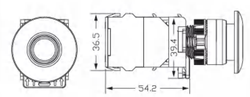
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 带灯高位按钮 Illuminated extended push button switch | LA38-B1-10HD | G R Y B W | NO - |  |
| | | LA38-B1-01HD | | - NC | |
| | | LA38-B1-11HD | | 1NO 1NC | |
| | 带灯自锁高位按钮 Illuminated maintained extended push button switch | LA38-B1-20HTD | | 2NO - | |
| | | LA38-B1-02HTD | | - 2NC | |
| | | LA38-B1-22HTD | | 2NO 2NC | |

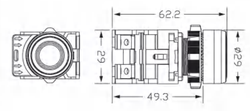
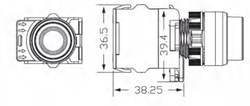


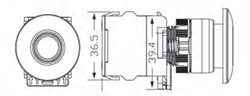


## LA38 按钮开关 LA38 Push button switch

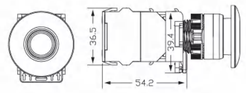
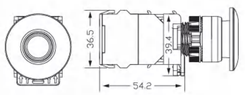
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 二位带灯选择开关 2 position illuminated selector switch | LA38-B1-10XD | G R Y B W | NO - |  |
| | | LA38-B1-01XD | | - NC | |
| | | LA38-B1-11XD | | 1NO 1NC | |
| | 三位带灯选择开关 3 position illuminated selector switch | LA38-B1-20XSD | | 2NO - | |
| | | LA38-B1-02XSD | | - 2NC | |
| | | LA38-B1-22XSD | | 2NO 2NC | |

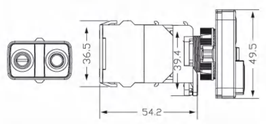
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 带灯磨菇头按钮 Illuminated mushroom push button switch | LA38-B1-10MD | G R Y B W | NO - |  |
| | | LA38-B1-01MD | | - NC | |
| | | LA38-B1-11MD | | 1NO 1NC | |
| | 带灯自锁磨菇头按钮 Illuminated maintained mushroom push button switch | LA38-B1-11MD | | 1NO 1NC | |
| | | LA38-B1-20MTD | | 2NO - | |
| | | LA38-B1-02MTD | | - 2NC | |

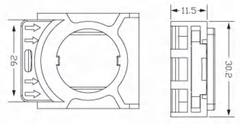
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 平头按钮 Flush push button switch | LA38-B3-10 | G R Y B W K | NO - |  |
| | | LA38-B3-01 | | - NC | |
| | | LA38-B3-11 | | 1NO 1NC | |
| | 平头自锁按钮 Flush maintained push button switch | LA38-B3-20T | | 2NO - | |
| | | LA38-B3-02T | | - 2NC | |
|  | 高位按钮 Extended push button switch | LA38-B3-10H | | NO - |  |
| | | LA38-B3-01H | | - NC | |
| | | LA38-B3-11H | | 1NO 1NC | |
| | 高位自锁按钮 Extended maintained push button switch | LA38-B3-20HT | | 2NO - | |
| | | LA38-B3-02HT | | - 2NC | |

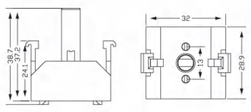
| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 蘑菇头按钮 Mushroom push button switch | LA38-B3-10M | G R Y B W K | NO - |  |
| | | LA38-B3-01M | | - NC | |
| | | LA38-B3-11M | | 1NO 1NC | |
| | 蘑菇头自锁按钮 Mushroom maintained push button switch | LA38-B3-11M | | 1NO 1NC | |
| | | LA38-B3-20MT | | 2NO - | |
| | | LA38-B3-02MT | | - 2NC | |

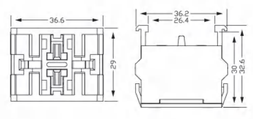
## LA38 按钮开关 LA38 Push button switch

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 急停按钮 Emergency stop switch | LA38-B3-01ZS | R | - NC |  |
| | | LA38-B3-11ZS | | 1NO 1NC | |
| | 带灯急停按钮 Illuminated emergency stop switch | LA38-B3-01ZSD | G R Y B W | - NC | |
| | | LA38-B3-11ZSD | | 1NO 1NC | |
|  | 带灯磨菇头按钮 Illuminated mushroom push button switch | LA38-B3-10MD | R | NO - |  |
| | | LA38-B3-01MD | | - NC | |
| | | LA38-B3-11MD | | 1NO 1NC | |
| | 带灯自锁磨菇头按钮 Illuminated maintained mushroom push button switch | LA38-B3-11MD | | 1NO 1NC | |
| | | LA38-B-20MTD | G R Y B W | 2NO - | |
| | | LA38-B1-02MTD | | - 2NC | |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 带灯双键按钮 Illuminated double push button switch | LA38-B3-11R LA38-B3-22R |  | 1NO 1NC |  |
| | | LA38-B3-11RD LA38-B3-22RD | | 2NO 2NC | |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | B 型中板 B type medium bracket | LA38-B-Z | GR | - |  |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | B 型灯座 B type lamp holder | LA38-B-D | G R Y B W | - |  |

| 外形图 Picture | 品名 Description | 型号 Model | 颜色 color | 触点类型 Contact type | 尺寸图 Outline drawing |
|---|---|---|---|---|---|
|  | 触点 Contact block | LA38-B-01 | G R | - |  |
| | | LA38-B-10 | | | |
| | | LA38-B-11 | | | |





# AD16 按钮开关 pushbutton switch



## 特点 Features

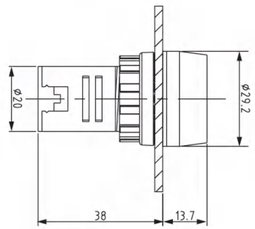
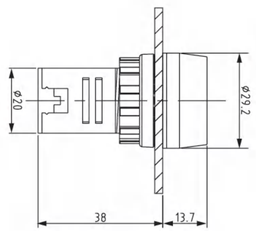
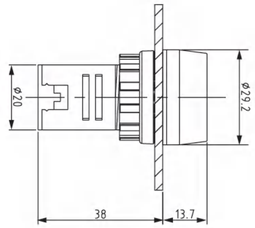
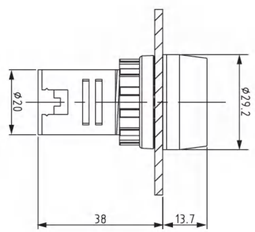
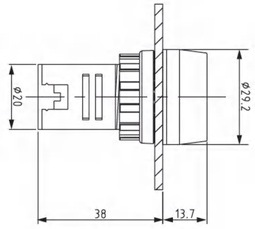
◎ 开孔尺寸：φ22mm，可通过选用变径圈来实现 φ25mm、φ30mm 的孔径；
◎ 多种头部风格，五种颜色，明确指示不同工作状态；
◎ 发光体采用纯色超高亮 led 芯片，色彩纯正，寿命可达 10 万小时；
◎ 可根据客户的需要，配置指示灯的字符内容；
◎ 零部件采用进口材料，坚固耐用，耐磨损；
◎ 内置螺钉式接线，更安全、方便。

◎ Hole opening size: φ22mm, φ25mm, φ30mm hole diameter can be realized by optional reducer ring;.
◎ Multiple head styles, five colors, clear indication of different working status;
◎ Luminous body adopts pure color super bright led chip, pure color, life time up to 100,000 hours;
◎ The character content of the indicator can be configured according to the needs of customers;
◎ Parts and components are made of imported materials, durable and wear-resistant.
◎ Built-in screw type wiring, safer and more convenient.

## 型号说明 Model Number Structure

AD16 - ⊙ ■ / □ - ○ △ ▲
① ② ③ ④ ⑤ ⑥ ⑦

| 项目 Item | 代号 Code | 说明 Description |
|---|---|---|
| ①系列号 Serial number | AD16 | 系列号 Serial number |
| ②安装孔径 Installation aperture | 22 | 022mm |
| ③功能代号 Function code | DS | 指示灯 Indicator light |
| | M | 蜂鸣器 Buzzer |
| | ML | 连续式蜂鸣器 Continuous buzzer |
| | SM | 闪光蜂鸣器 Flash buzzer |
| | SML | 常亮连续式蜂鸣器 Constant bright continuous buzzer |
| ④辅助代号 Auxiliary code | 无 None | 常规型 Conventional |
| | F | 放电灯 Discharge lamp |
| | K | 抗干扰电压 Anti-interference voltage |
| | FS | 防水信号灯 Waterproof Indicator Light |
| ⑤颜色 Color | ○ | 红 绿 黄 蓝 白 黑<br>只有无灯蜂鸣器可选择黑色<br>Black is only available for no light buzzer |
| ⑥灯电压 Lamp voltage | △ | AC/DC6V AC/DC12V AC/DC24V AC/DC36V AC/DC 48V<br>AC/DC110V AC/DC220V AC/DC380V AC110V AC 220V AC 380V<br>其他特殊电压需咨询能否定做<br>For other special voltages ,please consult the manufacturer |
| ⑦干扰电压 Interference voltage | ▲ | 24V 40V 60V 90V 110V<br>其他特殊电压需咨询能否定做<br>For other special voltages ,please consult the manufacturer |

| 外形图 Picture | 颜色 color | 尺寸图 Outline drawing |
|---|---|---|
|  | R G Y B W B |  |
|  | R G Y B W B |  |
|  | R G Y B W B |  |
|  | R G Y B W B |  |
|  | R G Y B W B |  |



# AD36 指示灯 Indicator light




## 产品概述 PRODUCT DESCRIPTION

AD36 系列信号指示灯均采用 LED 高度纯色，寿命长、能耗低、体积小、重量轻， 是 XD 型各类白炽灯和氖灯信号指示灯的更新换代产品， 灯罩采用高强度聚碳酸酯制成，具有良好的抗冲击性能，内置柳钉式接线，更加安全、方便。该系列信号指示灯适用于铁路、电力、电讯、机床、船舶、纺织、印刷、矿山机械等设备的线路中作信号指示、预告信号、事故信号及其他指示用信号。

Taking LED chip as the light source, AD136 series indicator light shows long service life, low energy consumption, small volume and light weight. It is the new generation product instead of XD Model incandescent lamps and neon indicating lamps. its lamp shade is made of high strength polycarbonate and with fine anti-impact capability. It is of inner screw Model connection, which makes the terminal more convenient and safer. This series of indicator lights are used as indicating, accidental signals and other pilot signal of instrument circuit in the areas of electric power, telecommunication, machinery, marine, textile, printing, mining etc.

## 性能特征 Performance characteristics

| | |
|---|---|
| 工作寿命 working life | ⩾ 3, 0000h |
| 瞬时电压波动立 Instantaneous voltage fluctuation | 0 ± 20%(110V 以上 Above ) |
| 工频耐压 Power frequency withstand voltage | 2.5KV ( 交流有效值 AC effective value ) 1min |
| 频率 (AC)frequency | 50-60Hz |
| 额定电流 Rated current | ⩽ 20mA |
| 光亮度 Luminance | ⩾ 100cd/m2 |
| 漏电指数 Leakage index | CTI ⩾ 100, 阻燃 Flame retardancy |
| 绝缘电阻 insulation resistance | Ui ⩽ 60V5MΩ |
| 发光颜色 Luminescence color | R G Y W B |

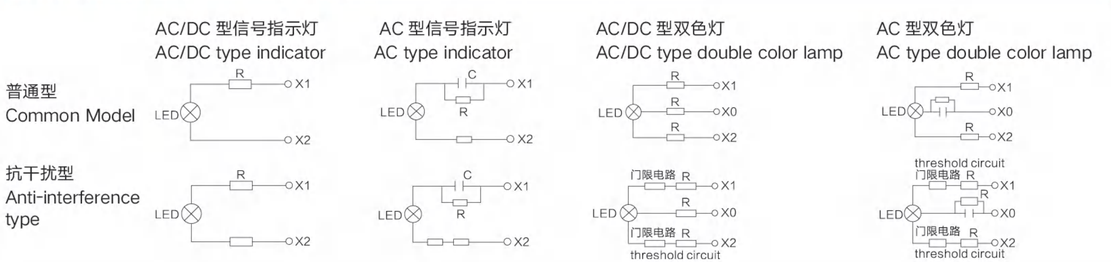
## 型号说明 Model Number Structure

AD36 - □ □ □ □ □ □

① ② ③ ④ ⑤ ⑥

| 代号 Code | 项目 Item |
|---|---|
| ① AD36 | 企业专用型号 Special model for enterprise |
| ②□ | 颈部产品尺寸 (φ16/22/30)Installing size of neck |
| ③□ | A、B、C、D、E、F、H 表示不同外观风格 A, B, C, D, E, F, H mean different appearance style. |
| ④□ | 无字母为标准型，"S" 表示短型壳体，"F" 表示放电灯 No letter is standard Model. Mark “S” for ultra-short Model, “F” for discharge lamp. |
| ⑤□ | 颜色 Color |
| ⑥□ | 电压 Voltage |

## 内部接线示意图 Internal wiring diagram




| 电压 Voltage | AC/DC6V | AC/DC12V | AC/DC24V | AC/DC36V | AC/DC48V | AC/DC110V | AC/DC220V | AC380V |
|---|---|---|---|---|---|---|---|---|
| 代码 Code | 21 | 22 | 23 | 24 | 25 | 26 | 28 | 32 |