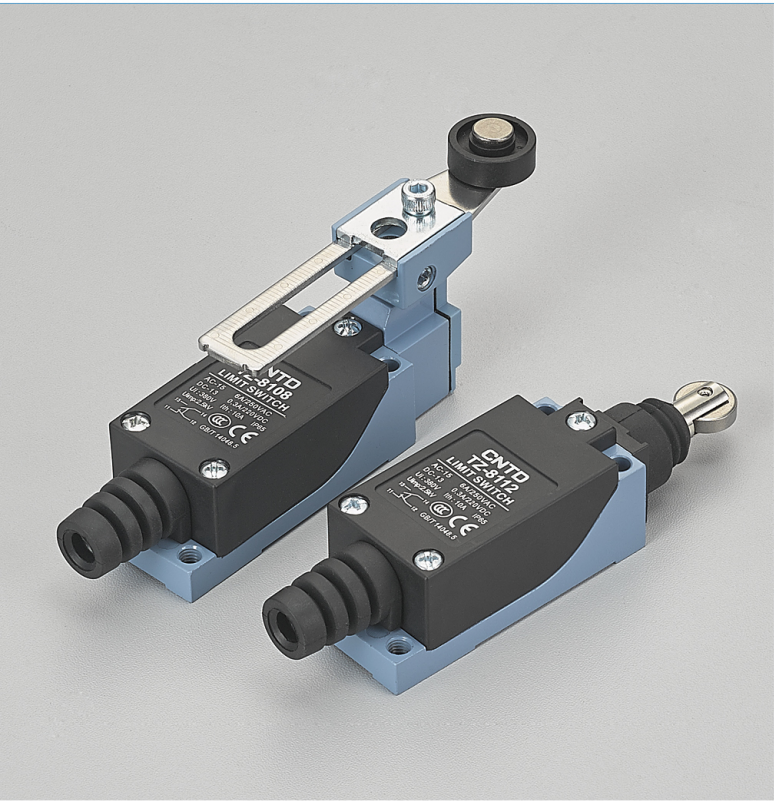


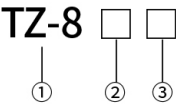


特点 Features

- 双回路型限位开关
- 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



选型说明 Model Designation



序号 No	项目 Item	代号 Code	说明 Description	强制断开有 / 无 Forced disconnection Yes/No
①	产品系列 Product series	TZ-8	设计代号 Design code	
②	头部结构 Head structure	104	塑胶滚轮摆杆型 Plastic roller swing rod type	仅 NC 端有强制断开 Only NC end has forced disconnection
		105	金属滚轮摆杆型 Metal roller swing rod type	仅 NC 端有强制断开 Only NC end has forced disconnection
		107	可调棒式摆杆型 Adjustable rod swing rod type	仅 NC 端有强制断开 Only NC end has forced disconnection
		108	可调摆杆塑胶滚轮型 Adjustable swing rod plastic roller type	仅 NC 端有强制断开 Only NC end has forced disconnection
		109	可调摆杆金属滚轮型 Adjustable swing rod metal roller type	仅 NC 端有强制断开 Only NC end has forced disconnection
		111	柱塞型 Plunger type	
		111M	柱塞型 (金属头部) Plunger type(Metal head)	
		112	横轮柱塞型 Cross wheel plunger type	
		112M	横轮柱塞型 (金属头部) Cross wheel plunger type (Metal head)	
		122	竖轮柱塞型 Vertical wheel plunger type	
		122M	竖轮柱塞型 (金属头部) Vertical wheel plunger type (Metal head)	
		166	塑料杆盘簧型 Plastic rod coil spring type	
		167	盘簧型 Coil spring type	
		168	金属杆盘簧型 Metal rod coil spring type	
		169	触须型 Tentacle type	
③	出线类型 Outgoing type	108H	可调摆杆橡胶滚轮型 Adjustable swing rod rubber roller type	仅 NC 端有强制断开 Only NC end has forced disconnection
		无 None	橡胶尾套 Rubber tail sleeve	

特性 Characteristics

操作速度 Operation speed	5mm 至 0.5m/s 5mm-0.5m/s
动作频率 Operating frequency	电气:30次/分 Electical: 30 operations/min
接触电阻 Contact resistance	25mΩ 以下 (初期) 25mΩmax. (initial value)
绝缘电阻 Insulation resistance	100MΩ 以上 (在 500VDC 以下) 100MΩ min. (at 500VDC)
最小使用负载 Minimum working load	DC24V 10mA 以上 Min DC24V 10mA
额定绝缘电压UI Rated insulation voltage	300V
额定冲击耐受电压Uimp Rated impulse withstand voltage	4kV
约定自由空气发热电流Ith Convention free air heating current	10A
电介强度 Dielectric strength	非连续端子间1000VAC, 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1500VAC, 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 and 接地之间1500VAC, 50/60Hz持续1分钟 1500VAC, 50/60 HZ for 1 minute between each terminal and ground
振动 Vibration	10至55Hz, 1.5mm双振幅 10-55Hz, 1.5mm double amplitude
冲击 Shock	机械耐久 :1,000m/Sec ² (约 100G' S) 误动作耐久 :300m/Sec ² (约 30G' S)*1 Mechanical durable: 1, 000m/Sec ² (about 100G' S) Malfunction: 300m/Sec ² (about 30G' S)*1
周围温度 Ambient temperature	使用时 : -20~+70°C (没有结冰) Using: -20~+70°C (With no icing)
湿度 Humidity	95%RH 以下 <95% RH
电气寿命 Electrical life	500000次以上(250V/6A 阻性负载时) More than 500,000 times (250V/6A resistive load)
保护构造 Degree of protection	IP65

*1: 盘簧型除外
*1: Except coil spring type

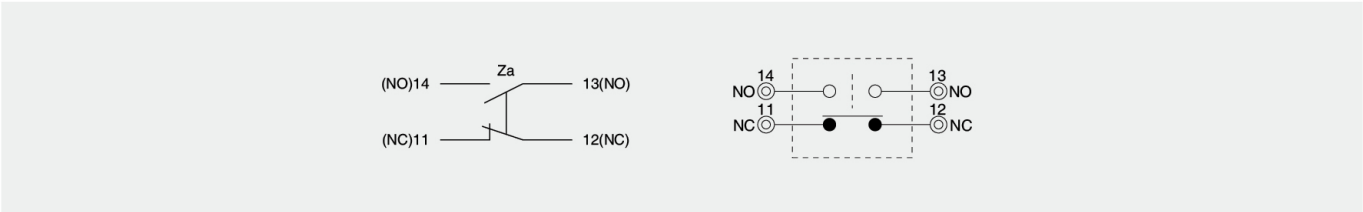
额定值 Ratings

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
AC125		6		1.5		3		2
AC250		6		1		3		1.5
DC12		6		3		4		3
DC24		6		3		4		3
DC125	0.4	0.2		-		-		-
DC50	0.4	0.2		-		-		-
浪涌电流 Surge current		NC	Max. 24A					
		NO	Max. 12A					

注意事项:
1. 左侧提到的数值代表稳定电流。
2. 感性负载是指在交流条件下功率因数为0.4, 或在直流条件下时间常数低于7ms的负载。
3. 灯负载指的是有10倍浪涌电流的负载。
4. 电动机负载是指负载有6倍浪涌电流的情况。

NOTES:
1.The figures mentioned initially denote the consistent current levels.
2.The term 'inductive load' applies to loads where the power factor is 0.4 in AC conditions or when the time constant is less than 7ms for DC.
3.Lamp load' is used to describe loads that experience surge currents up to 10 times their normal rate.
4.Motor load' indicates loads that undergo up to 6 times their regular surge current.

接点型式 Contact Form



国际认证规格 International Certification Specifications

认证规格 Certification specifications	规格 Specifications	文件No. Document
CCC	GB/T 14048.5	请咨询昌得代表处 Please consult the CNTD Representative Office
TUV	EN 60947-5-1	
CE		

安全规格认证额定值 Safety Specification Certification Rating

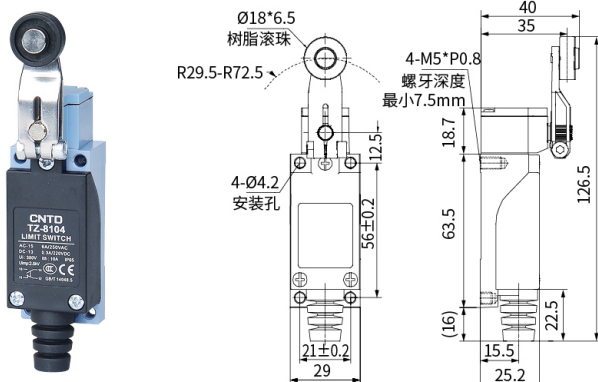
CCC(GB/T 14048.5)、TUV(EN 60947-5-1)

类型与额定值 Type and Rating	
AC-15	6A/250V 阻性负载 Resistive load
DC-13	0.3A/220V 阻性负载 Resistive load

外观和尺寸 Appearance and Dimension

TZ-8104

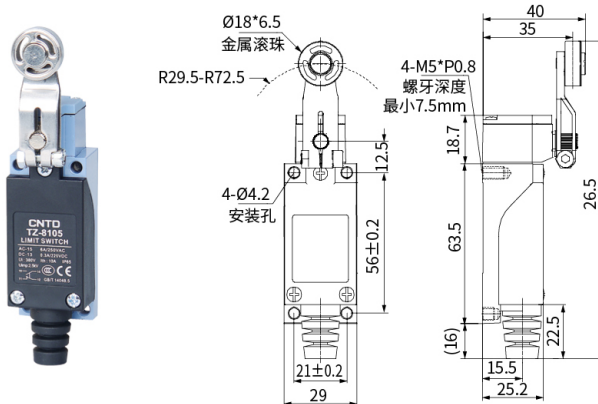
塑胶滚轮摆杆型
Plastic roller
swing rod type



动作特性 Operating Characteristics	TZ-8104
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min)	95°
动作位置 OP(mm.)	-

TZ-8105

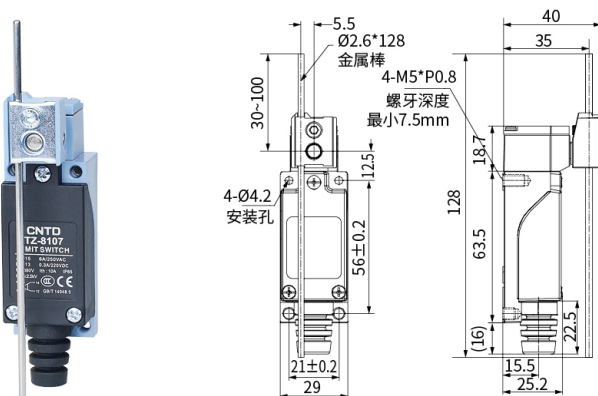
金属滚轮摆杆型
Metal roller
swing rod type



动作特性 Operating Characteristics	TZ-8105
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min)	95°
动作位置 OP(mm.)	-

TZ-8107

可调棒式摆杆型
Adjustable rod
swing rod type

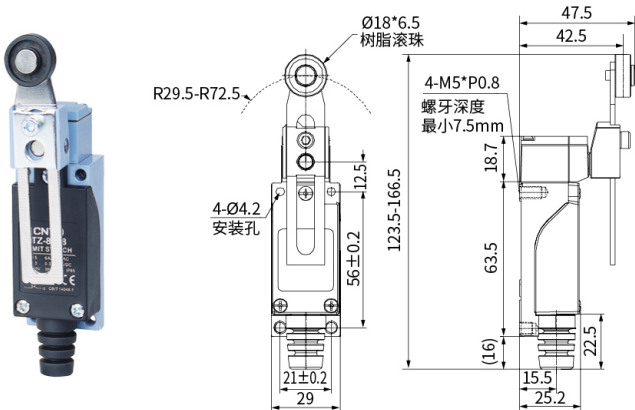


动作特性 Operating Characteristics	TZ-8107
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min)	95°
动作位置 OP(mm.)	-

外观和尺寸 Appearance and Dimension

TZ-8108

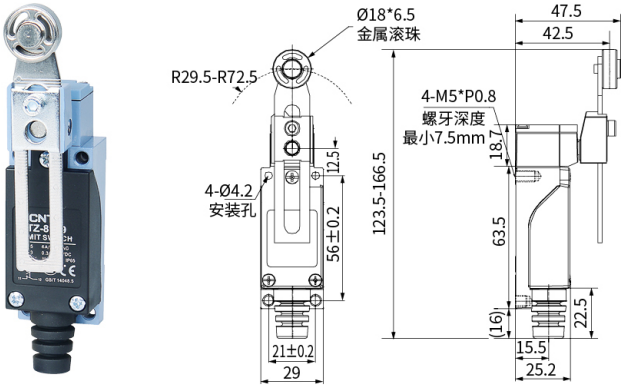
可调摆杆塑胶滚轮型
Adjustable swing
rod plastic
roller type



动作特性 Operating Characteristics	TZ-8108
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min)	95°
动作位置 OP (mm.)	-

TZ-8109

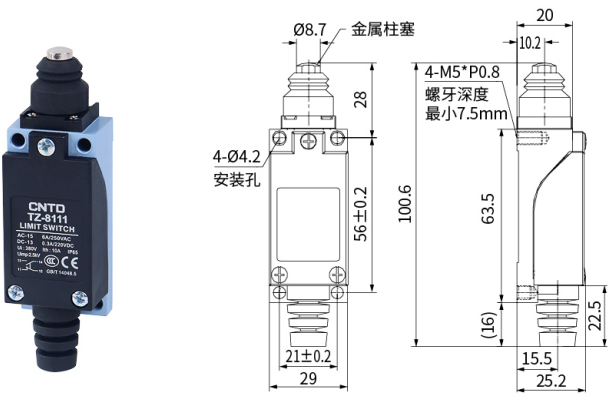
可调摆杆金属
滚轮型
Adjustable
swing rod metal
roller type



动作特性 Operating Characteristics	TZ-8109
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min)	95°
动作位置 OP (mm.)	-

TZ-8111

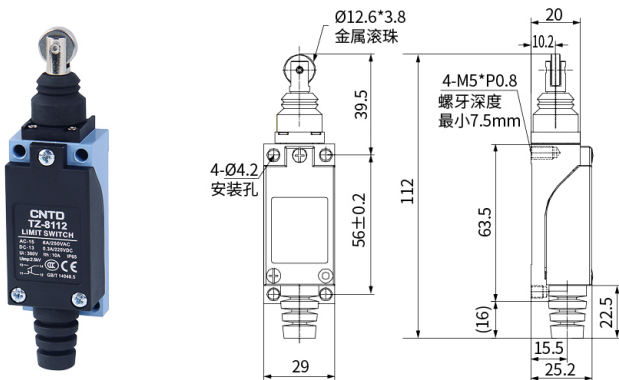
柱塞型
Plunger type



动作特性 Operating Characteristics	TZ-8111
动作力 OF (最大Max.)	9N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	1.8mm
过行程 OT (最小Min.)	4mm
运动差异 MD (最大Max.)	1mm
总行程 TT (最小Min)	5.5mm
动作位置 OP (mm.)	26±0.8mm

TZ-8112

横轮柱塞型
Cross wheel
plunger type

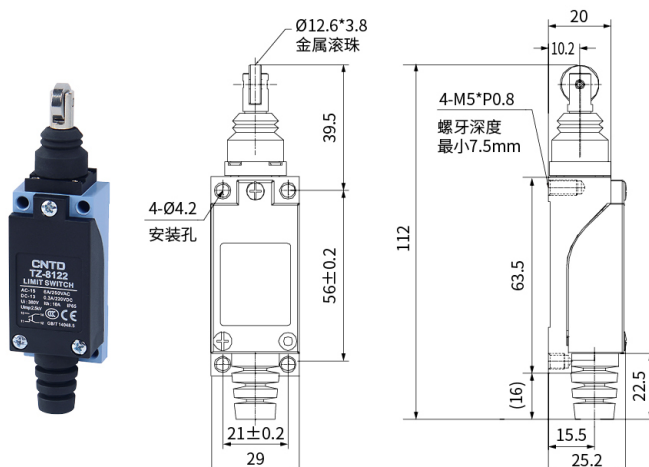


动作特性 Operating Characteristics	TZ-8112
动作力 OF (最大Max.)	9N
释放力 RF (最小Min.)	1.5N
预行程 PT (最大Max.)	1.8mm
过行程 OT (最小Min.)	4mm
运动差异 MD (最大Max.)	1mm
总行程 TT (最小Min)	5.5mm
动作位置 OP (mm.)	37±0.8mm

外观和尺寸 Appearance and Dimension

TZ-8122

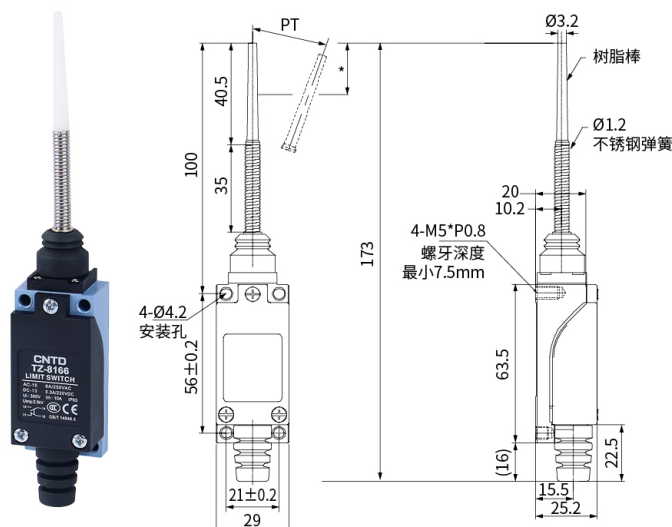
竖轮柱塞型
Vertical wheel
plunger type



动作特性 Operating Characteristics	TZ-8122
动作力 OF (最大Max.)	9N
释放力 RF (最小Min.)	1.5N
预行程 PT (最大Max.)	1.8mm
过行程 OT (最小Min.)	4mm
运动差异 MD (最大Max.)	1mm
总行程 TT (最小Min.)	5.5mm
动作位置 OP (mm.)	37±0.8mm

TZ-8166

塑料杆盘簧型
Plastic rod coil
spring type

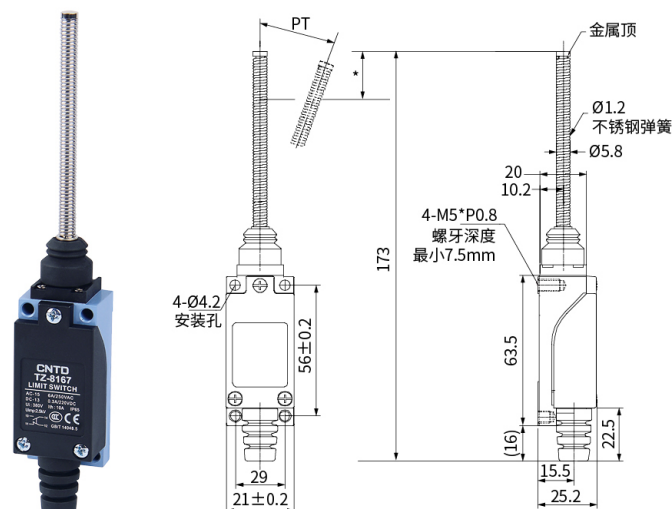


动作特性 Operating Characteristics	TZ-8166
动作力 OF (最大Max.)	1.5N
释放力 RF (最小Min.)	-
预行程 PT (最大Max.)	15°±5°
过行程 OT (最小Min.)	-
运动差异 MD (最大Max.)	10°±2°
动作位置 OP (mm.)	-

* 操作杆的使用范围是从尖端到引动器全长的 1/3 内。
*The range of use for the operating lever is from the tip of the operating rod to within one third of the full length of the actuator.

TZ-8167

盘簧型
Coil spring type



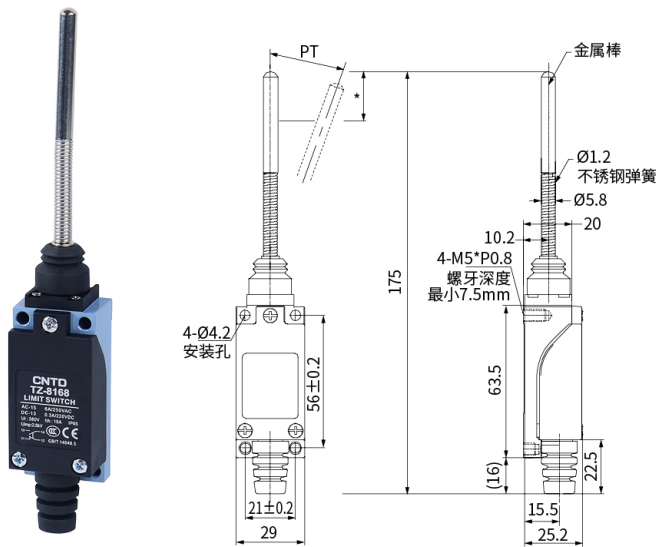
动作特性 Operating Characteristics	TZ-8167
动作力 OF (最大Max.)	1.5N
释放力 RF (最小Min.)	-
预行程 PT (最大Max.)	15°±5°
过行程 OT (最小Min.)	-
运动差异 MD (最大Max.)	10°±2°
动作位置 OP (mm.)	-

* 操作杆的使用范围是从尖端到引动器全长的 1/3 内。
*The range of use for the operating lever is from the tip of the operating rod to within one third of the full length of the actuator.

外观和尺寸 Appearance and Dimension

TZ-8168

金属杆盘簧型
Metal rod coil
spring type

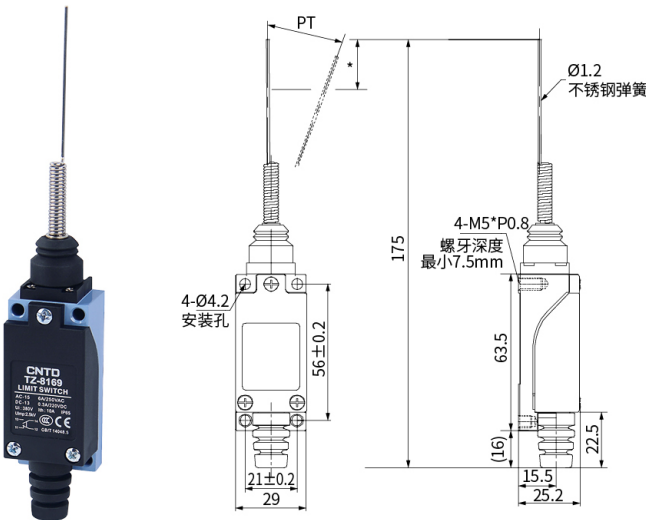


动作特性 Operating Characteristics	TZ-8168
操作力 OF (最大Max.)	150g
回弹力 RF (最小Min.)	-
预行程 PT (最大Max.)	30mm
过行程 OT (最小Min.)	-
回差 MD (最大Max.)	-
动作位置 OP(mm.)	-

操作杆的使用范围是从尖端到引动器全长的 1/3 内。
The range of use for the operating lever is from the tip of the operating rod to within one third of the full length of the actuator.

TZ-8169

触须型
Tentacle type

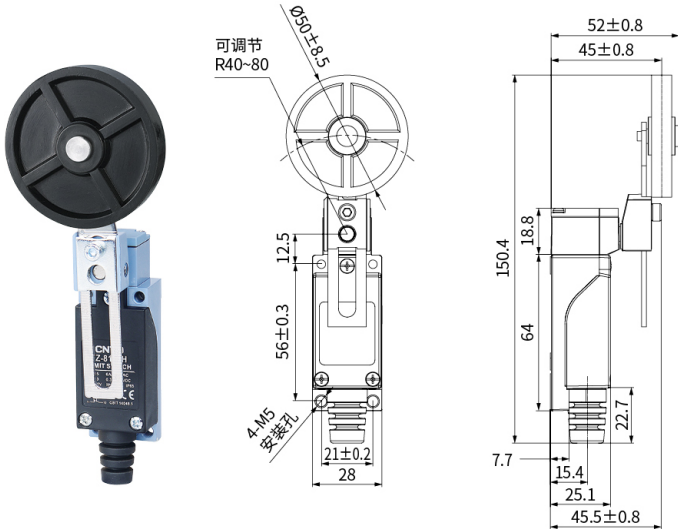


动作特性 Operating Characteristics	TZ-8169
动作力 OF (最大Max.)	1.5N
释放力 RF (最小Min.)	-
预行程 PT (最大Max.)	15°±5°
过行程 OT (最小Min.)	-
运动差异 MD (最大Max.)	10°±2°
动作位置 OP(mm.)	-

* 操作杆的使用范围是从尖端到引动器全长的 1/3 内。
*The range of use for the operating lever is from the tip of the operating rod to within one third of the full length of the actuator.

TZ-8108H

可调摆杆橡胶
滚轮型
Adjustable
swing rod rubber
roller type



动作特性 Operating Characteristics	TZ-8108H
动作力 OF (最大Max.)	7.5N
释放力 RF (最小Min.)	1N
预行程 PT (最大Max.)	20°
过行程 OT (最小Min.)	75°
运动差异 MD (最大Max.)	12°
总行程 TT (最小Min.)	95°
动作位置 OP(mm.)	-

使用注意事项 Using Precautions

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- 要求极高可靠性的应用场合，包括核能、燃气、电力等要求长期稳定运行的系统。
- 要求极高安全性的应用场合，涉及人身安全与财产的情况。
- 苛刻条件、严酷环境的应用场合，包括室外、存在化学污染、电磁、振动或冲击影响的环境。
- 有火灾或爆炸风险的应用场合，包括存在易燃易爆性气体、强酸强碱化学品等物质的环境。
- 涉及军工用途、航天航空项目的应用场合。

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- Applications requiring very high security, situations involving personal safety and property.
- Applications in harsh conditions, harsh environments, including outdoor, chemical contamination, electromagnetic, vibration or shock effects.
- Applications where there is a risk of fire or explosion, including environments where flammable and explosive gases, strong acids and alkali chemicals are present.
- Applications involving military use and aerospace projects.