

特点 Features

- 双回路型限位开关
 - 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
 - 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



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 Electrical: 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 1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts 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/Sec ² (约 100G' S) 误动作耐久:300m/Sec ² (约 30G' S) Mechanical durable: 1,000m/Sec ² (about 100G' S) Malfunction: 300m/Sec ² (about 30G' S)
周围温度 Ambient temperature	使用时:-20~+80℃ (没有结冰)
湿度 Humidity	95%RH 以下 <95% RH
电气寿命 Electrical life	500,000 次以上 500,000 operations above
保护构造 Protection level	IP66

注: 导管连接器尺寸常规默认为 M20x1.5, 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, outfitting cable connector. Conduit connector size is PG13.5, with product model number plus (-P), example:CWLCA2-2-P.

额定值 Ratings

额定电压 Rated Voltage	非感性负载 Noninductive Load (A)				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	2.0		
250VAC	5	2	1	5	3	1.0		
480VAC	3	1.5	0.8	3	1.5	0.8		
600VAC	1	1	0.5	1.5	1	0.5		
8VDC	10	6	3	10	6			
14VDC	10	6	3	10	6			
30VDC	6	4	3	6	4			
125VDC	0.8	0.2	0.2	0.8	0.2			
250VDC	0.4	0.1	0.1	0.4	0.1			

- 注: 1. 电感性负载: 功率因素=0.4; 时间常数=7msec.
2. 灯泡负载之突入电流为稳定状态电流之 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.

动作特性 Operating Characteristics

型号 Model	CWL	CWLCA2-2	CWLD2	CWLNJ	CWLNJ-S2	CWLCA12-2-Q	CWLCA12-2-QD	CWLCL	CWLCA32-41	CWLCA32-42	CWLD	CWLNJ-2	CWLNJ-30	CWLD1	CWLD3
操作力 Operating Force	OF(最大)(Max.)	1360g	2720g	150g	29g	1360g	142g	1200g	2720g	120g	80g	2720g	2720g	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°	55O	1.7mm	28mm	28mm	1.7mm	1.7mm	1.7mm	1.7mm
过行程 Over Travel	OT(最小)(Min.)	30°	5.6mm	-	-	30°	30°	35O	6.4mm	-	-	5.6mm	5.6mm	5.6mm	5.6mm
行程移动分辨率 Movement Differential	MD(最大)(Max.)	12°	1mm	-	-	12°	12°	-	1mm	-	-	1mm	1mm	1mm	1mm
总行程动作力 Total Force	TF 最大 (Max.)	2720g	-	-	-	2720g	200g	-	-	-	-	2720g	2720g	2720g	2720g
总行程 Total Travel	TT 最小 (Min.)	50°	6.5 ± 0.8mm	-	-	50°	50°	OP:90 ± 10o	OP:34 ± 2.8mm	-	-	6.5 ± 0.8mm	9 ± 0.8mm	9 ± 0.8mm	9 ± 0.8mm

外观和尺寸 Appearance and Dimension

CWLCA2-2

可选配塑胶滚轮
Optional plastic idler wheel

CWLCA12-2-Q

可选配塑胶滚轮
Optional plastic idler wheel

CWLCL

CWLD

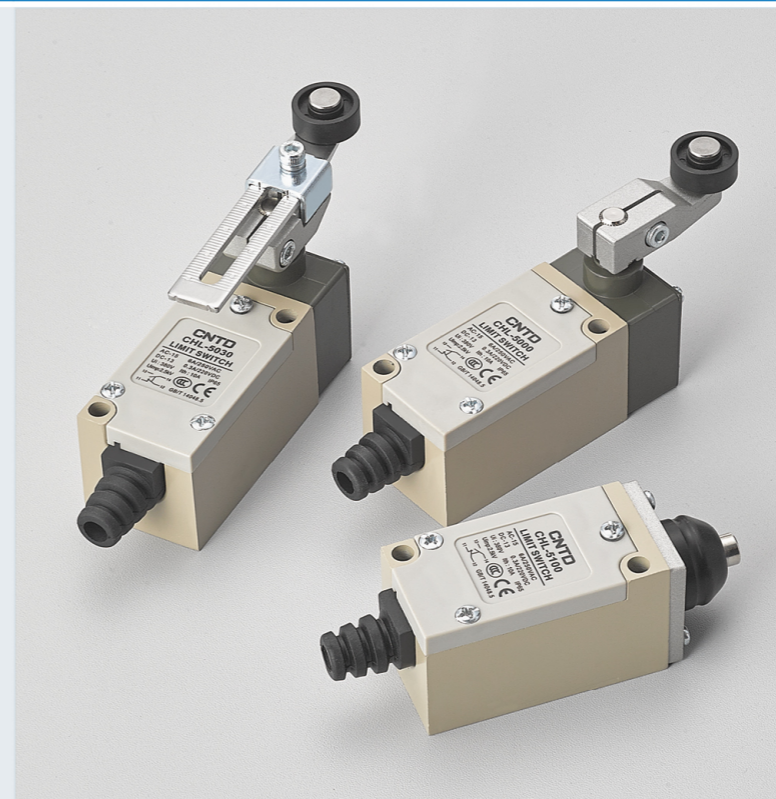
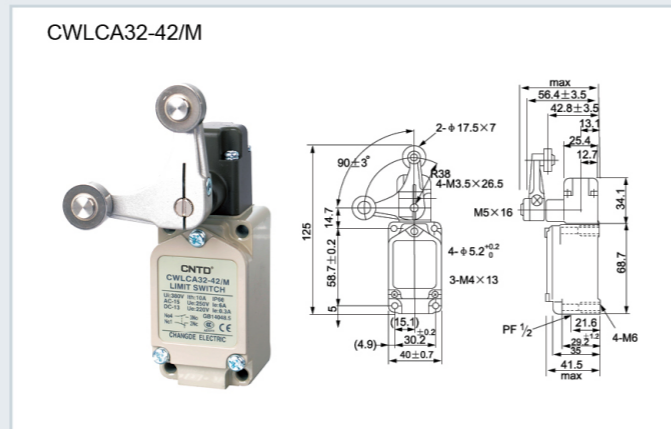
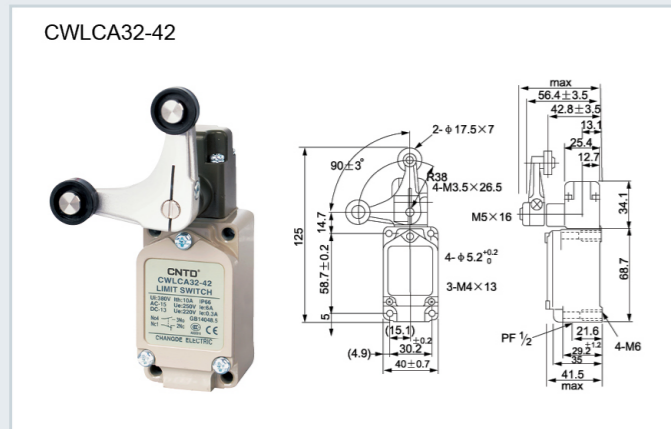
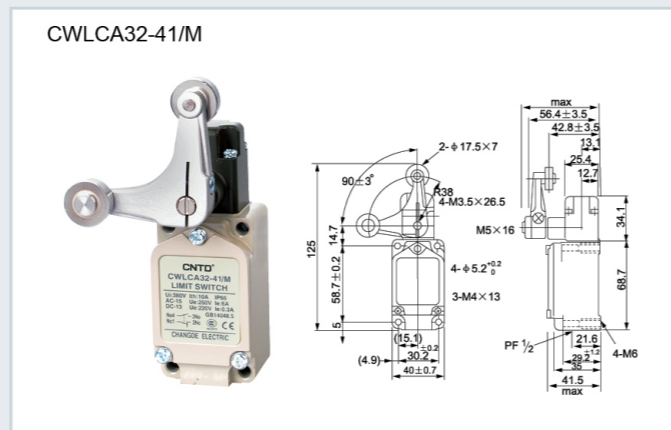
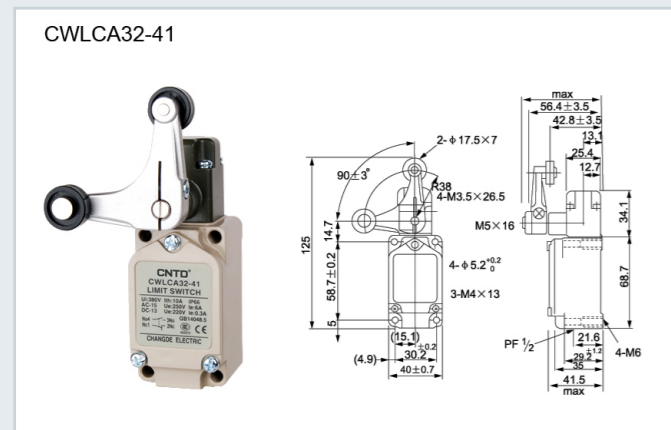
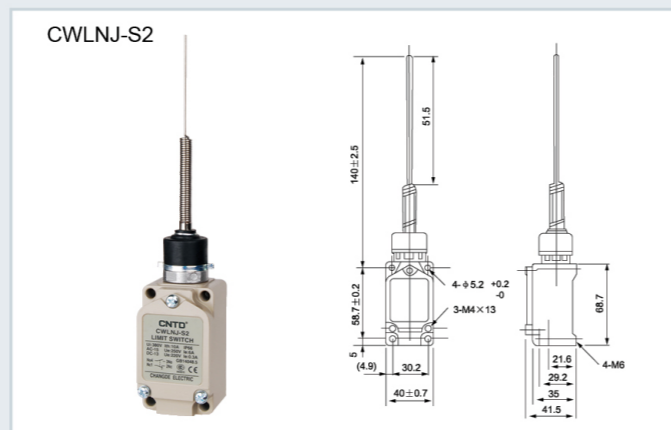
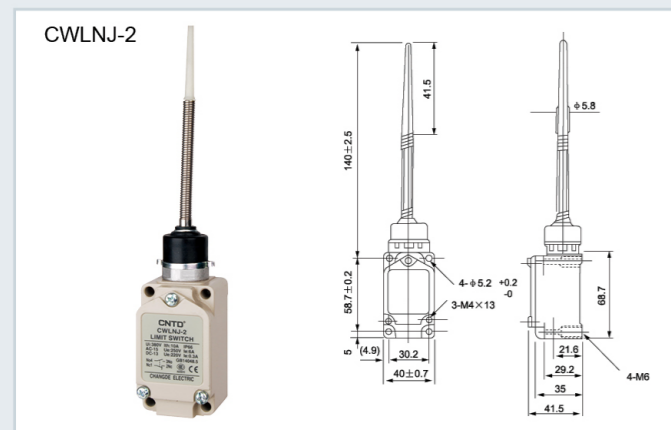
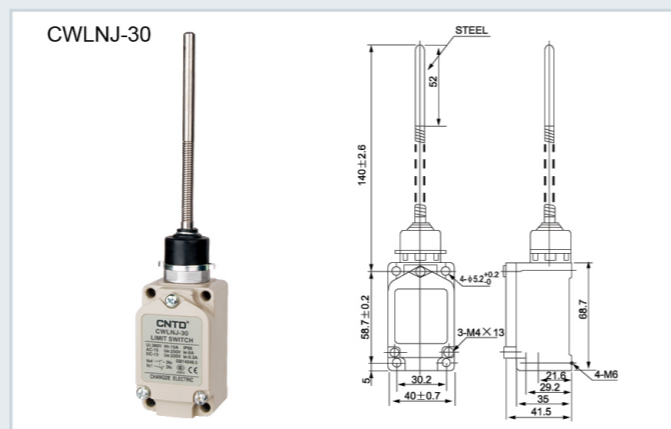
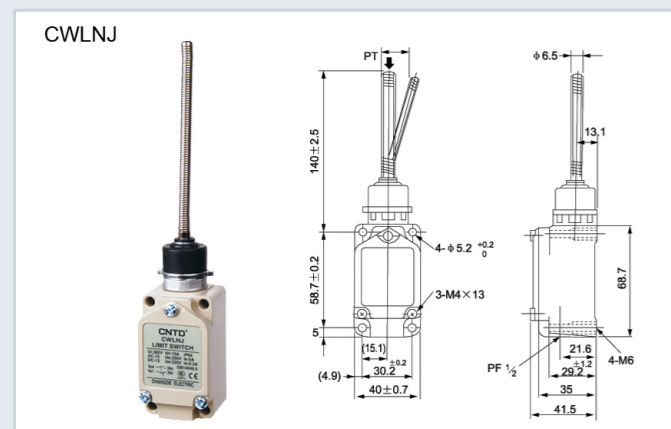
CWLD1

CWLD2

CWLD3

CWLCA12-2-QD

外观和尺寸 Appearance and Dimension



特点 Features

- 引动器种类多，方便使用
- 使配线更加简易的导管设计
- 金属外壳，高机械强度
- 内藏触点座有双簧片设计，机械寿命长

- Various actuators for different applications
- Conduit design for convenient cabling
- Metal shell with high mechanical strength
- Built-in contact box has double-spring and long mechanical life

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	3	3	5	4	3	3
14VDC	5	5	3	3	4	4	3	3
30VDC	5	5	3	3	4	4	3	3
125VDC	0.4	0.4						
250VDC	0.2	0.2						
突入电流 Inrush Current	N.C.:24A 以下, N.O.:12A 以下 N.C.: below 24A, N.O.: below 12A							

注: 1. 电感性负载之功率因素在 0.4 以上 (AC), 时间常数在 7msec 以下 (DC).
2. 灯泡负载之突入电流为稳定状态电流之 10 倍。马达负载之突入电流为稳定状态电流之 6 倍。
3. 带弹簧系列产品, 操作体的使用范围为从弹簧的前端到弹簧全长的 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 5mm-0.5m/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/Sec ² (约 100G' S) 误动作耐久: 300m/Sec ² (约 30G' S) Mechanical durable: 1,000m/Sec ² (about 100G'S) Malfunction: 300m/Sec ² (about 30G'S)
周围温度 Ambient temperature	使用时: -20~+70°C (没有结冰) Using: -20~+70°C (With no icing)
湿度 Humidity	95%RH 以下 <95% RH
电气寿命 Electrical life	500,000 次以上 500,000 operations above
保护构造 Protection level	IP65

动作特性 Operating Characteristics

型号	Model	CHL	CHL-5000	CHL-5030	CHL-5050	CHL-5100	CHL-5200	CHL-5220	CHL-5300	CHL-5330	CHL-5381	CHL-5391
操作力	Operating force	OF (最大)(Max.)	750g	750g	750g	750g	900g	900g	150g	150g	150g	550g
回弹力	Release force	RF (最小)(Min.)	100g	100g	100g	200g	200g	200g	30g	30g	30g	100g
预行程	Pre-travel	PT (最大)(Max.)	20°	20°	20°	1.8mm	1.8mm	1.8mm	30mm	30mm	30mm	20°
触发位置	Tripping position	TP ± 10%	22.5°	22.5°	22.5°	2.0mm	2.0mm	2.0mm	22.5°	22.5°	22.5°	22.5°
行程移动分辨率	Movement differential	MD (最大)(Max.)	10°	10°	10°	1.2mm	1.2mm	1.2mm	14°	14°	14°	14°
过行程	Over travel	OT (最小)(Min.)	75°	75°	75°	4.0mm	4.0mm	4.0mm	20mm	20mm	20mm	75°
总行程	Total travel	TT (最小)(Min.)	95°	95°	95°	5.8mm	5.8mm	5.8mm	50mm	50mm	50mm	95°