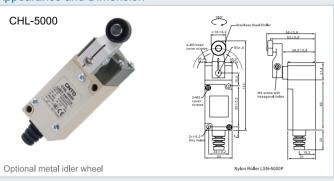
## **CHL** Vertical Limit Switch

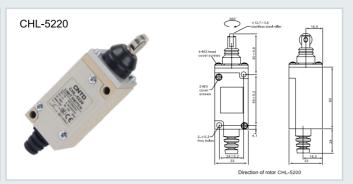


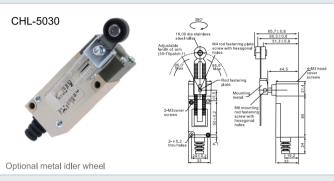
# **CSA** Vertical Limit Switch

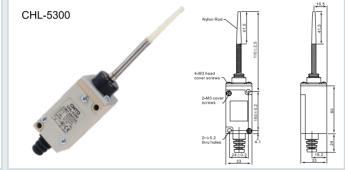


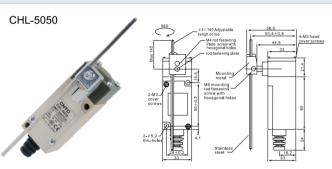


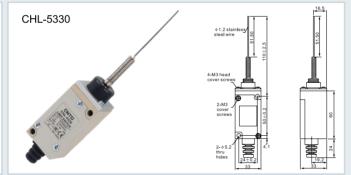




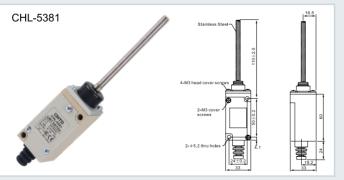


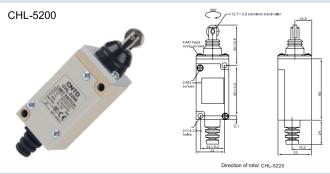


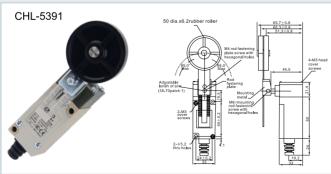














- Double circuit type of limit switch
- ■High mechanical strength, consists of intensive plastic and
- Water-proof and oil proof construction
- Built-in contact box has double-spring and long mechanical life
- Smooth operation with larger over travel distance
- Various actuators for different application

#### Contact Form

NO 13 — 14 NO NC 11 — 12 NC

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Rated Voltage	No	ninductiv	/e Load (	(A)	Inductive Load (A)				
	Resistance Load		Lamp	Load	Inductiv	e Load	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							
Inrush	N.C; below 24A, N.O; below 12A								
Current	14.0. Delow 24A, N.O. Delow 12A								

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.

#### **Specifications**

Operation speed	5mm-0.5m/s
Operating frequency	Electical: 30 operations/min
Contact resistance	25m $Ω$ max. (initial value)
Insulation resistance	100m $\Omega$ min. (below 500VDC)
Dielectric strength	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between current-carrying and non-current-carrying metal parts
	1500VAC, 50/60 Hz for 1 minute between each terminal and ground
Vibration	10-55Hz,1.5mm double amplitude
Shock	Mechanical durable: 1, 000m/Sec² (about 100G'S) Malfunction: 300m/Sec² (about 30G'S)
Ambient temperature	Using: -20~+70℃ (With no icing)
Humidity	<95% RH
Electrical life	500,000 operations above
Protection level	IP66

NOTES: 1.Inductive load has a power factor of 0.4 min.(AC) and a time constant of 7 msec. NOTES: The default size of conduit connector is M18x1.5.Conduit connector size is PG11.5, with product model number plus (-P), example:CSA-012-P.

### **Operating Characteristics**

Model	CSA	CSA-001	CSA-003	CSA-012	CSA-021 CSA-021M	CSA-041	CSA-031 CSA-031M	CSA-051	CSA-061	CSA-071	CSA-081
Operating force	OF (Max.)	800g	800g	800g	400g	400g	400g	400g	150g	150g	150g
Release force	RF (Min.)	400g	400g	400g	100g	100g	100g	100g	50g	50g	50g
Pre-travel	PT (Max.)	1.8mm	1.8mm	1.8mm	20°	20°	20°	20°	30mm	30mm	30mm
Tripping position	TP ± 10%	2.0mm	2.0mm	2.0mm	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°
Movement differential	MD (Max.)	1.2mm	1.2mm	1.2mm	10°	10°	10°	10°	14°	14°	14°
Over travel	OT (Min.)	4.0mm	4.0mm	4.0mm	75°	75°	75°	75°	20mm	20mm	20mm
Total travel	TT (Min.)	5.8mm	5.8mm	5.8mm	95°	95°	95°	95°	50mm	50mm	50mm
Rotary indexing					22.5°	22.5°	22.5°	22.5°			

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