

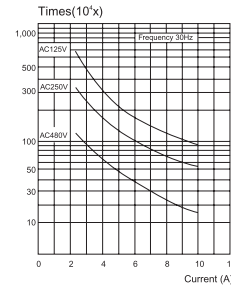


# CLS Limit Switch

## Features

- Economical & plastic type
- Stainless steel roller, punch and spring
- Swing amplitude, extra large  $\pm 95^\circ$
- PG13.5 cable gland that can be equipped.

## Electrical life



## Specification

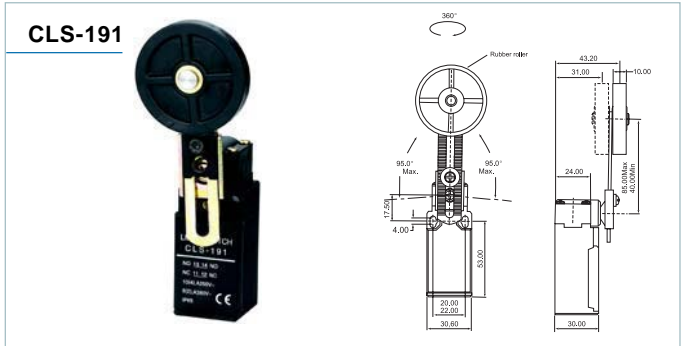
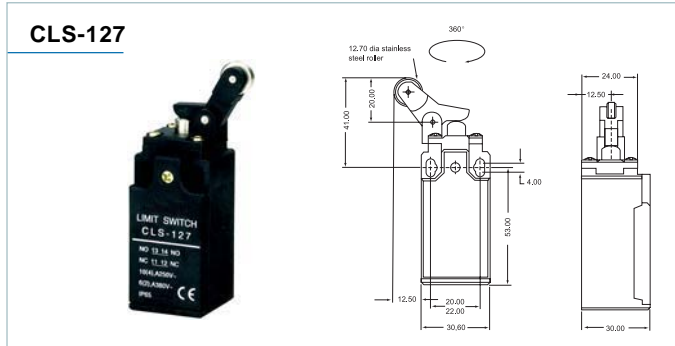
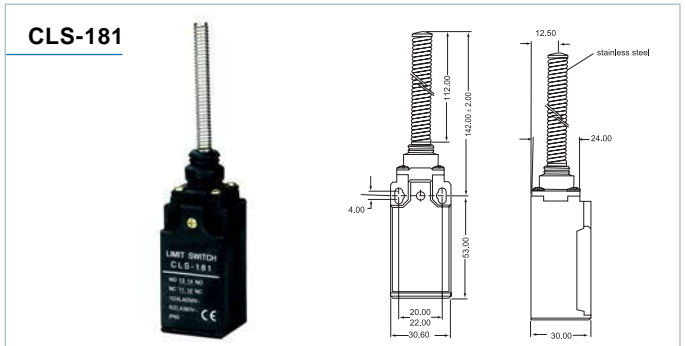
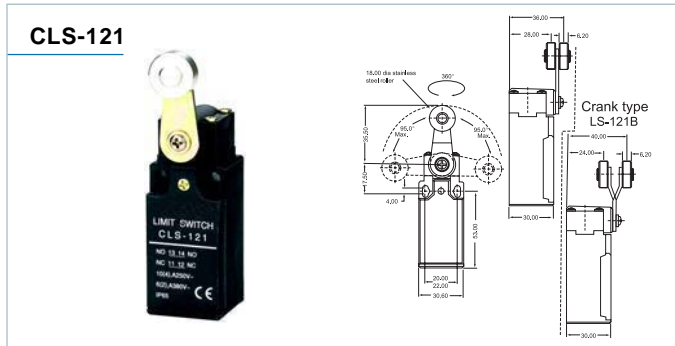
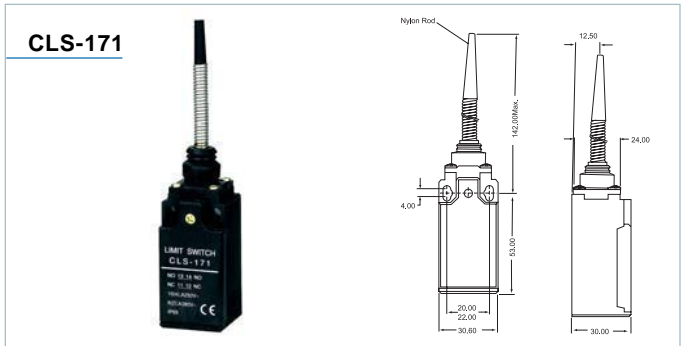
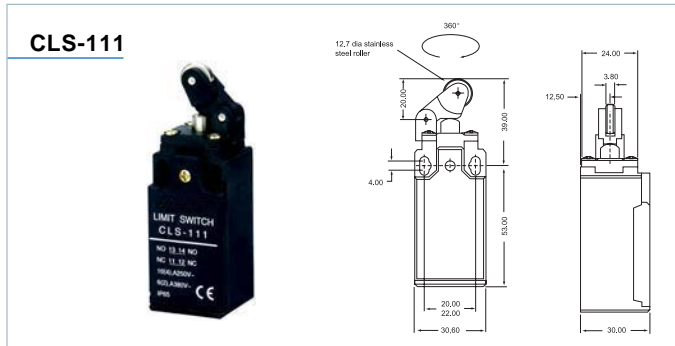
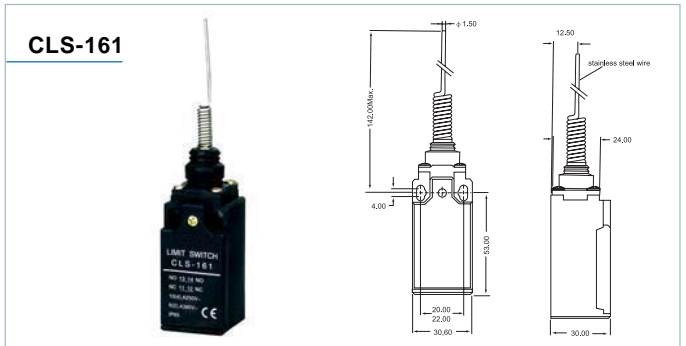
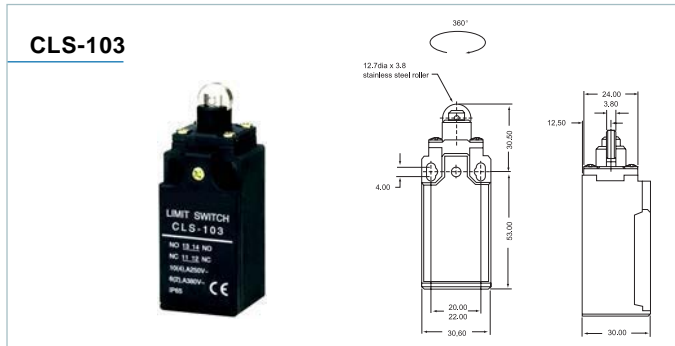
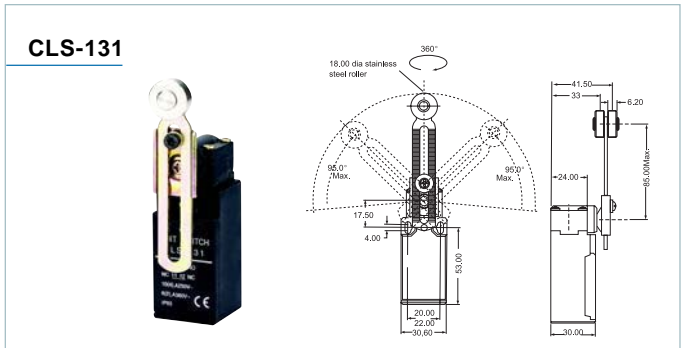
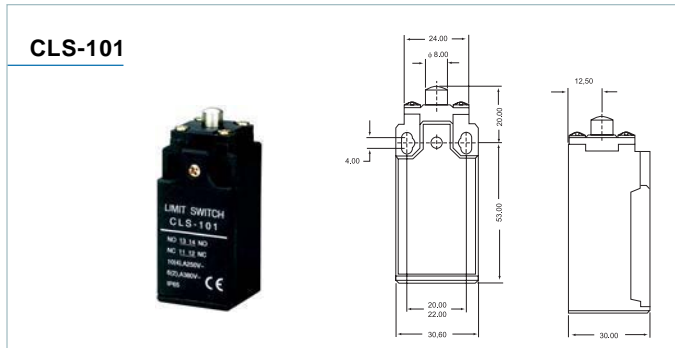
Model	CLS	101	103	111	121	127	131	161	171	181	191
		301	303	311	321	327	331	361	371	381	391
Operating force	OF Max.	700g	700g	700g	500g	700g	500g-cm	100g	100g	100g	500g-cm
Release force	RF Min.	200g	200g	200g	100g-cm	200g	100g-cm	40g	40g	40g	100g-cm
Pre-travel	PT Max.	1.8mm	1.8mm	1.8mm	20°	1.8mm	20°	30mm	30mm	30mm	20°
Tripping position	TP $\pm 10\%$	2.0mm	2.0mm	2.0mm	22.5°	2.0mm	22.5°	22.5°	22.5°	22.5°	22.5°
Movement differential	MD Max.	1.2mm	1.2mm	1.2mm	10°	1.2mm	10°	14°	14°	14°	10°
Over travel	OT Min.	4.0mm	4.0mm	4.0mm	75°	4.0mm	75°	20mm	20mm	20mm	75°
Total travel	TT Min.	5.8mm	5.8mm	5.8mm	95°	5.8mm	95°	50mm	50mm	50mm	95°
Rotary indexing					22.5°		22.5°				22.5°

## Characteristics

Double Break Mechanism	INO+INC Force Break snap action
Rated Voltage / Current	10(4)A, 125, 250VAC / 6(2)A, 380VAC For inductance Load, $\text{Cos } \phi = 0.4$
Contact Resistance	25m $\Omega$ max. (initial value)
Insulation Resistance	100m $\Omega$ min. (at 500VDC)
Dielectric Strength	1000VAC, 50/60 HZ for 1 minute between terminals of the same polarity
	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
Electrical Life	500, 000 at 10A 250VAC Resistive
Mechanical Life	10, 000, 000 operations min. (under rated conditions)
Operating Speed	5mm/s to 0.5m/s
Degree of Protection	IP65
Ambient Temperature Rised	Max 30°C over ambient temperature at rated voltage/current
Conformed Standards	Cenelec EN 50041, EN 50047, IEC 337-1, VDE 0660
Operating Temperature	-5°C ~ +65°C (with no icing)
Storage Temperature	-5°C ~ +65°C (with no icing)
Ambient Operating Humidity	95° RH Max.
Shock Resistance	Mechanical durable: 1000m/s <sup>2</sup> min.
	Malfunction: 300m/s <sup>2</sup> min.
Vibration Frequency	Malfunction: 10 to 55HZ 1.5mm double amplitude
Terminal Screw Torsional Force	6-8 kgf-cm
Other Screw Torsional Force	Cover 12-14 kgf-cm/Head 8-9 kgf-cm/Mounting 50-60 kgf/cm
Bare Wire Diameter	$\phi$ 2 Max.
Cable Diameter	$\phi$ 12 Max.

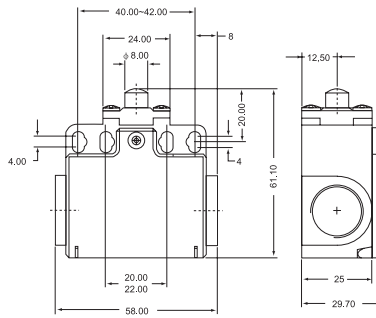
# CLS Limit Switch

## Appearance and dimension

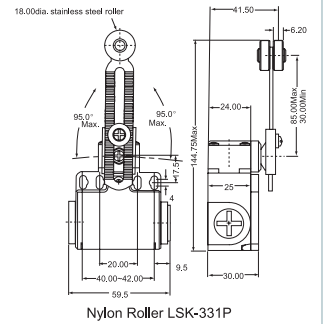


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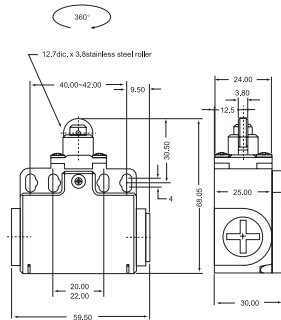
**CLS-301**



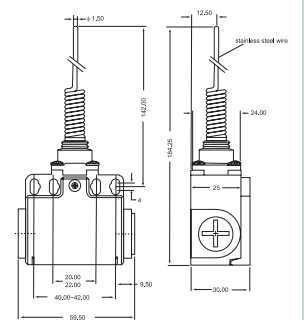
**CLS-331**



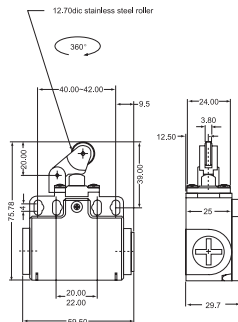
**CLS-303**



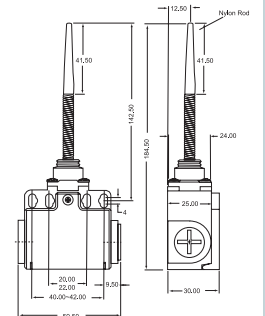
**CLS-361**



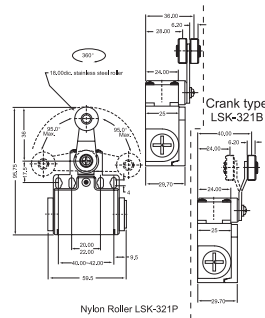
**CLS-113**



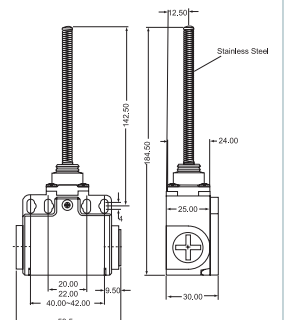
**CLS-173**



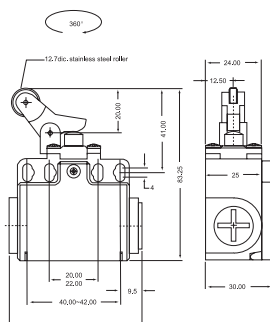
**CLS-321**



**CLS-381**



**CLS-327**



**CLS-391**

