

## INDUSTRIAL COMPONENT

# HXC Limit Switch

Standard: EN60947-5-1



### Features

- ◆ 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

### Contact Form



### Selection Code

HXC	KM	8108	E
<b>Limit Switch</b>	<b>KM:</b> Metal box <b>KP:</b> Plastic box <b>KD:</b> full-metal box <b>MP:</b> Micro switch, plastic box	<b>Selection of triggering head type</b>	<b>E:</b> Eco type

### Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive 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 Current	N.C: below 24A, N.O: below 12A							

- 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.

## INDUSTRIAL COMPONENT

# HXC Limit Switch

Standard: EN60947-5-1



### Specifications

<b>Operation speed</b>	5mm-0.5m/s
<b>Operating frequency</b>	Electical: 30 operations/min
<b>Contact resistance</b>	25mΩ max. (initial value)
<b>Insulation resistance</b>	100mΩ min. (below 500VDC)
<b>Dielectric strength</b>	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
<b>Vibration</b>	10-55Hz, 1.5mm double amplitude
<b>Shock</b>	Mechanical durable: 1,000m/Sec <sup>2</sup> (about 100G'S) Malfunction: 300m/Sec <sup>2</sup> (about 30G'S)
<b>Ambient temperature</b>	Using: -20~+70°C (With no icing)
<b>Humidity</b>	<95% RH
<b>Electrical life</b>	500,000 operations above
<b>Protection level</b>	IP65

### Operating Characteristics

Model	HXCKM-8E	HXCKM-8104E HXCKM-8105E	HXCKM-8108E HXCKM-8109E	HXCKM-8107E	HXCKM-8111E	HXCKM-8112E HXCKM-8122E
Operating force	OF Max	750g	750g	750g	900g	900g
Release force	RF Min	100g	100g	100g	150g	150g
Pre-travel	PT Max	20°	20°	20°	1.5mm	1.5mm
Over travel	OT Min	50°	50°	50°	4mm	4mm
Movement differential	MD Max	12°	12°	12°	1mm	1mm
Operating position	OP mm	-	-	-	26±0.8mm	37±0.8mm

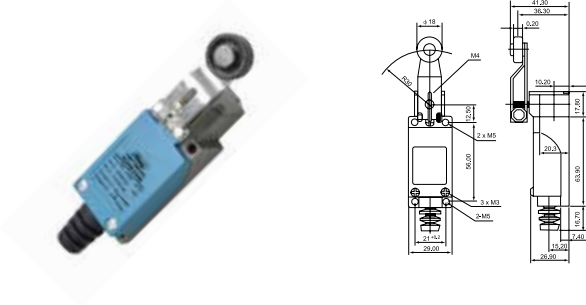
# HXC Limit Switch

Standard: EN60947-5-1

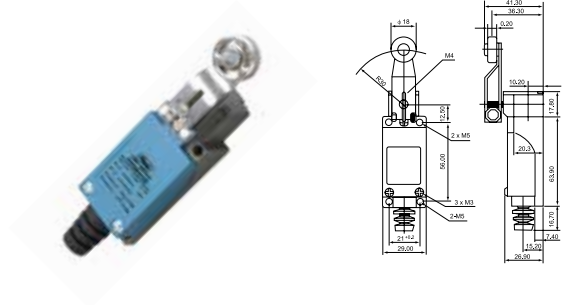


## Appearance and Dimension

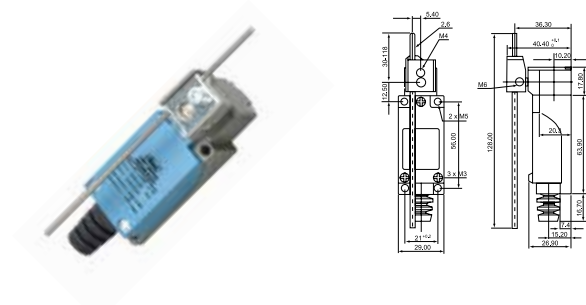
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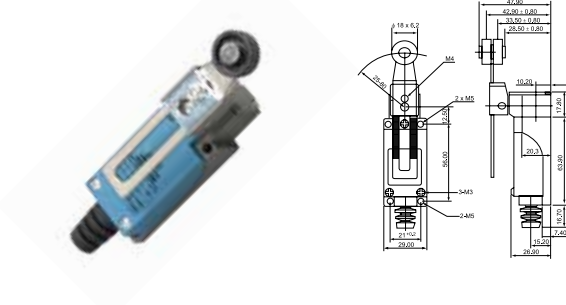
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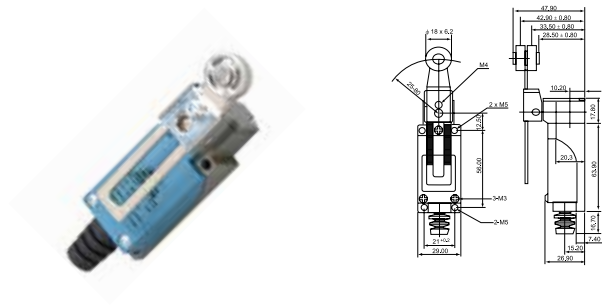
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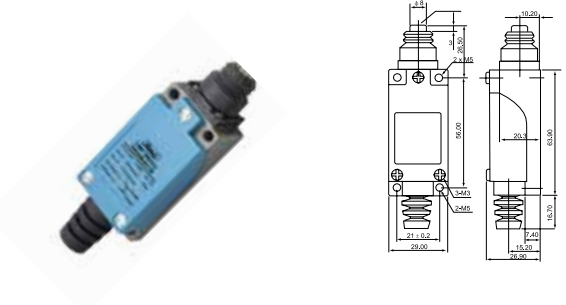
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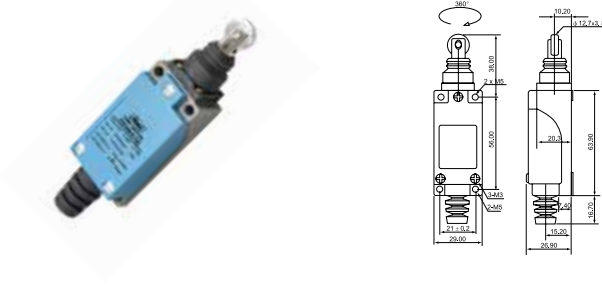
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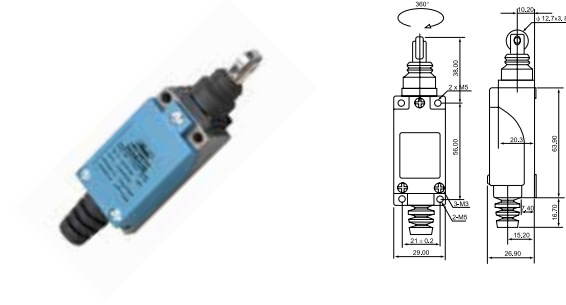
HXCKM-8111E



HXCKM-8112E



HXCKM-8122E



## INDUSTRIAL COMPONENT

# HXC Limit Switch

Standard: EN60947-5-1



### Features

- ◆ Double circuit type of limit switch
- ◆ Economic plastic type of limit switch
- ◆ 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 applications

### Contact Form



### Selection Code

HXC	KP	121	M
<b>Limit Switch</b>	<b>KM:</b> Metal box <b>KP:</b> Plastic box <b>KD:</b> full-metal box <b>MP:</b> Micro switch, plastic box	<b>Selection of triggering head type</b>	<b>M:</b> Metal head type

### Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive 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 Current	N.C: below 24A, N.O: below 12A							

- 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.

# HXC Limit Switch

Standard: EN60947-5-1



## Specifications

<b>Operation speed</b>	5mm-0.5m/s
<b>Operating frequency</b>	Electical: 30 operations/min
<b>Contact resistance</b>	25mΩ max. (initial value)
<b>Insulation resistance</b>	100mΩ min. (below 500VDC)
<b>Dielectric strength</b>	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
<b>Vibration</b>	10-55Hz,1.5mm double amplitude
<b>Shock</b>	Mechanical durable: 1,000m/Sec <sup>2</sup> (about 100G'S) Malfunction: 300m/Sec <sup>2</sup> (about 30G'S)
<b>Ambient temperature</b>	Using: -20~+70°C (With no icing)
<b>Humidity</b>	<95% RH
<b>Electrical life</b>	500,000 operations above
<b>Protection level</b>	IP65

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:HXCCKP-103-P.

## Operating Characteristics

Model	HXCCKP	101	102/103	111	112	121/121M	127	131/131M
Operating force	OF Max	700g	700g	700g	700g	500g	700g	500g
Release force	RF Min	200g	200g	200g	200g	100g	200g	100g
Pre-travel	PT Max	1.8mm	1.8mm	1.8mm	1.8mm	20°	1.8mm	20°
Tripping position	TP±10%	2.0mm	2.0mm	2.0mm	2.0mm	22.5°	2.0mm	22.5°
Movement differential	MD Max	1.2mm	1.2mm	1.2mm	1.2mm	10°	1.2mm	10°
Over travel	OT Min	3.7mm	3.7mm	3.7mm	3.7mm	75°	3.7mm	75°
Total travel	TT Min	5.5mm	5.5mm	5.5mm	5.5mm	95°	5.5mm	95°
Rotary indexing						22.5°		22.5°

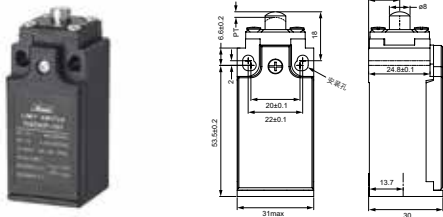
# HXC Limit Switch

Standard: EN60947-5-1

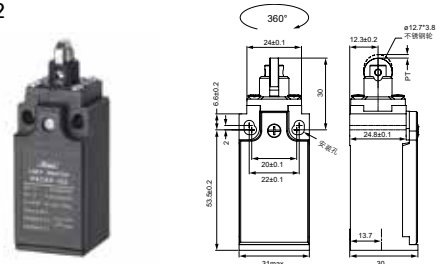


## Appearance and Dimension

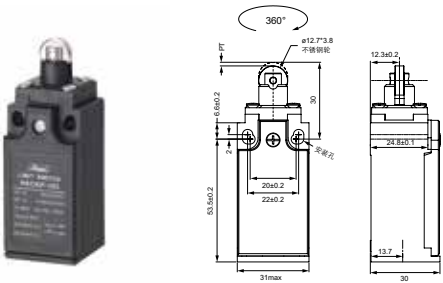
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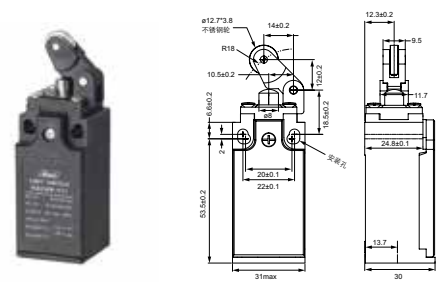
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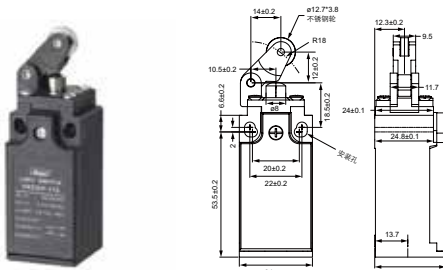
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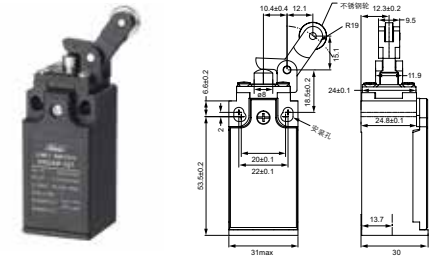
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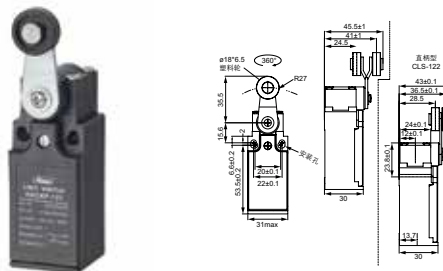
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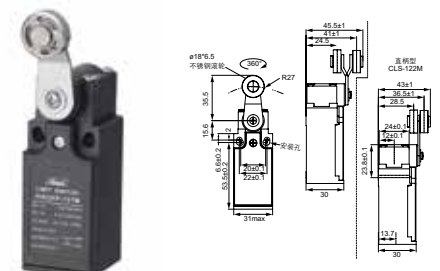
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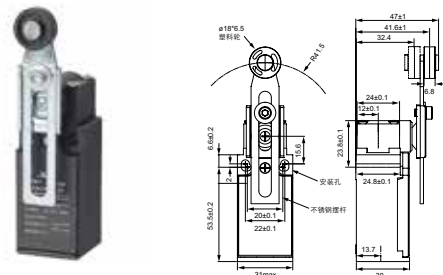
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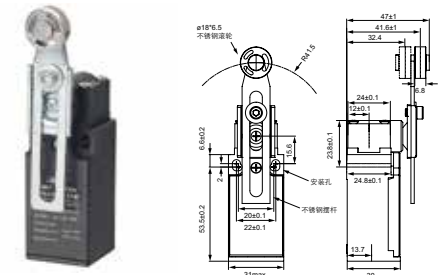
HXCKP-121M



HXCKP-131



HXCKP-131M



## INDUSTRIAL COMPONENT

# HXC Limit Switch

Standard: EN60947-5-1



### Features

- ◆ 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
- ◆ Various actuators for different application

### Contact Form



### Selection Code

HXC	KD	21	M
<b>Limit Switch</b>	<b>KM:</b> Metal box <b>KP:</b> Plastic box <b>KD:</b> full-metal box <b>MP:</b> Micro switch, plastic box	<b>Selection of triggering head type</b>	<b>M:</b> Metal head type

### Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)			
	Resistance Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	5		1.5	0.7	3	3	2	1
250VAC	5		1	0.5	3	3	1.5	0.8
8VDC	5		3	3	5	4	3	3
14VDC	5		3	3	4	4	3	3
30VDC	5		3	3	4	4	3	3
125VDC	0.4							
250VDC	0.2							
Inrush Current	N.C: below 24A, N.O: below 12A							

- 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.

## INDUSTRIAL COMPONENT

# HXC Limit Switch

Standard: EN60947-5-1



### Specifications

<b>Operation speed</b>	5mm-0.5m/s
<b>Operating frequency</b>	Electical: 30 operations/min
<b>Contact resistance</b>	25mΩ max. (initial value)
<b>Insulation resistance</b>	100mΩ min. (below 500VDC)
<b>Dielectric strength</b>	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
<b>Vibration</b>	10-55Hz,1.5mm double amplitude
<b>Shock</b>	Mechanical durable: 1,000m/Sec <sup>2</sup> (about 100G'S) Malfunction: 300m/Sec <sup>2</sup> (about 30G'S)
<b>Ambient temperature</b>	Using: -20~+70°C (With no icing)
<b>Humidity</b>	< 95% RH
<b>Electrical life</b>	500,000 operations above
<b>Protection level</b>	IP66

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

### Operating Characteristics

Model	HXCKP	HXCKP-001	HXCKP-003	HXCKP-021/021M	HXCKP-031/031M	HXCKP-012	HXCKP-041	HXCKP-051
Operating force	OF Max	800g	800g	400g	400g	800g	400g	400g
Release force	RF Min	400g	400g	100g	100g	400g	100g	100g
Pre-travel	PT Max	1.8mm	1.8mm	20°	20°	1.8mm	20°	20°
Tripping position	TP±10%	2.0mm	2.0mm	22.5°	22.5°	2.0mm	22.5°	22.5°
Movement differential	MD Max	1.2mm	1.2mm	10°	10°	1.2mm	10°	10°
Over travel	OT Min	4.0mm	4.0mm	75°	75°	4.0mm	75°	75°
Total travel	TT Min	5.8mm	5.8mm	95°	95°	5.8mm	95°	95°
Rotary indexing				22.5°	22.5°		22.5°	22.5°



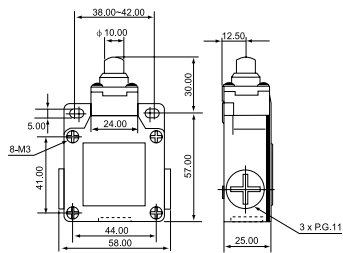
# HXC Limit Switch

Standard: EN60947-5-1

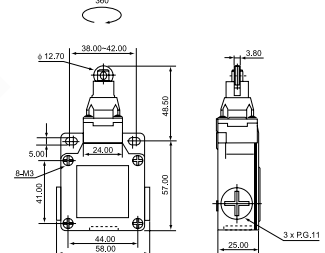


## Appearance and Dimension

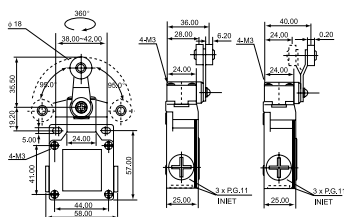
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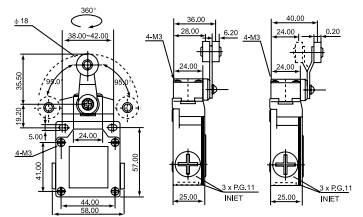
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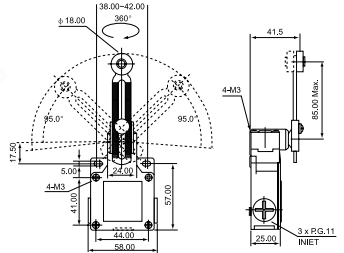
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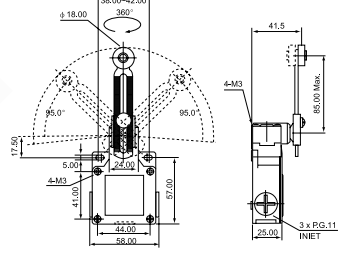
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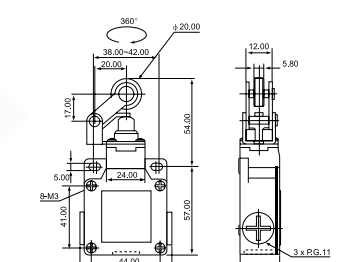
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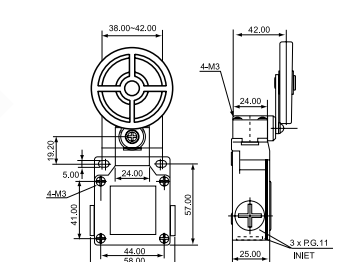
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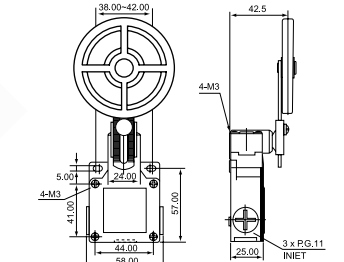
HXCKD-012



HXCKD-041



HXCKD-051



## INDUSTRIAL COMPONENT

# HXC Limit Switch

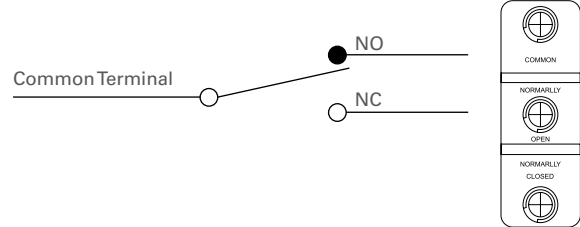
Standard: EN60947-5-1



### Features

- ◆ Various actuators and some with adjustable operating position (such as HXCMP-1701)
- ◆ High accuracy wide range of operation speed

### Contact Form



### Selection Code

HXC	MP	1703	M
<b>Limit Switch</b>	<b>KM:</b> Metal box <b>KP:</b> Plastic box <b>KD:</b> full-metal box <b>MP:</b> Micro switch, plastic box	<b>Selection of triggering head type</b>	<b>M:</b> Metal head type

### Ratings

Rated Voltage	Noninductive Load (A)				Inductive Load (A)				Inrush Current	
	Resistance Load		Lamp Load		Inductive Load		Motor Load			
	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	15		3	1.5	15		5	2.5		
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	30 max	30 max
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		

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.

# HXC Limit Switch

Standard: EN60947-5-1



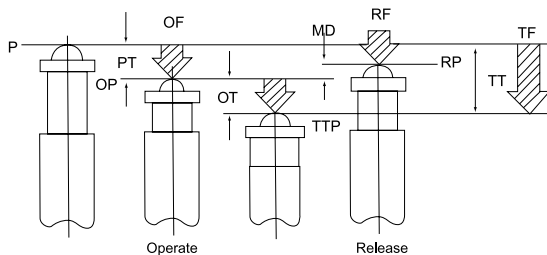
## Specifications

<b>Operation speed</b>	5mm-0.5m/s(Plunger type)
<b>Operating frequency</b>	Electical: 20 operations/min
<b>Contact resistance</b>	15mΩ max. (initial value)
<b>Insulation resistance</b>	100mΩ min. (below 500VDC)
<b>Dielectric strength</b>	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
<b>Vibration</b>	(*10 to 20Hz): 1.5Vibration amplitude action duration: 10 to 55Hz
<b>Shock</b>	Mechanical durable: 1,000m/Sec <sup>2</sup> (about 100G'S) Malfunction: 300m/Sec <sup>2</sup> (about 30G'S)
<b>Ambient temperature</b>	Using: -20~+80°C (With no icing)
<b>Humidity</b>	General purpose type: 85% RH max., Sealed type: 95% RH max
<b>Electrical life</b>	500,000 operations above
<b>Weight</b>	About 22 to 58g

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:HXCKP-103-P.

## Operating Characteristics

Model	HXCMP1306	HXCMP1307	HXCMP1308 HXCMP1308X	HXCMP1309	HXCMP1701 HXCMP1706	HXCMP1702	HXCMP-1703 HXCMP-1703M	HXCMP-1704 HXCMP-1704M	HXCMP1705
OF Max	350g	350g	350g	350g	70g	160g	100g	160g	10g
RF Min	114g	114g	114g	114g	14g	28g	22g	42g	3g
PT (Max.)	0.4mm	0.4mm	0.4mm	0.4mm	10mm	5mm	7.1mm	2.7mm	20mm
OT (Min.)	1.6mm	5.5mm	5.5mm	3.58mm	5.6mm	2mm	4mm	2.4mm	5.6mm
MD (Max.)	0.05mm	0.05mm	0.05mm	0.05mm	1.27mm	1mm	1.02mm	0.5mm	3mm
FP (Max.)					28.2mm	24.8mm	36.5mm	32.5mm	
OP(mm)	21.5±0.5	21.8±0.8	21.8±0.8	33.4±1.2	19±0.8	19±0.4	30.2±0.8	30.2±0.4	19±0.8



OF: Operating Force  
RF: Releasing Force  
TF: Total Force  
FP: Free Position  
OP: Operating Position  
RP: Releasing Position

TTP: Total Travel Position  
PT: Pre Travel  
OT: Over Travel  
MD: Movement Differential  
TT: Total Travel

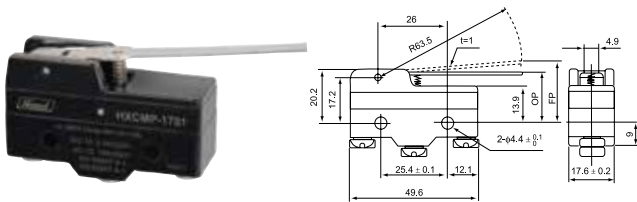
# HXC Limit Switch

Standard: EN60947-5-1

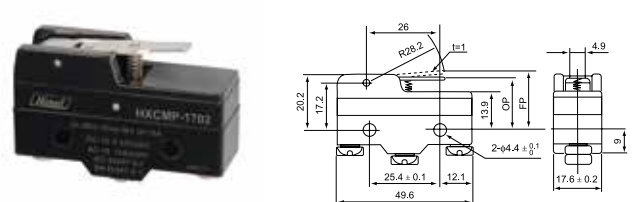


## Appearance and Dimension

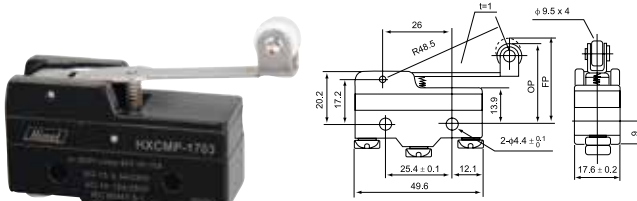
HXCMP-1701



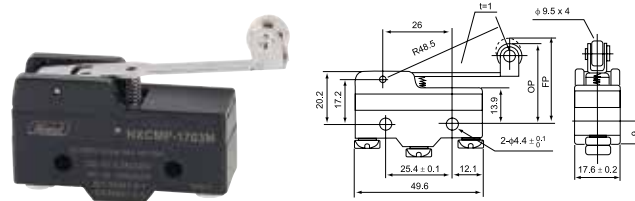
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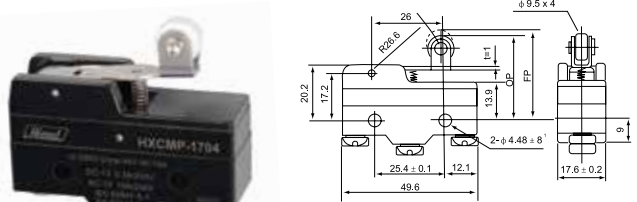
HXCMP-1703



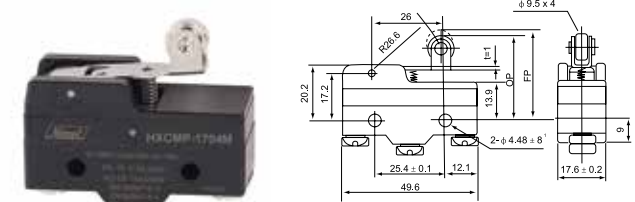
HXCMP-1703M



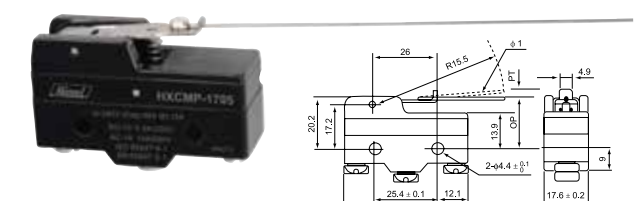
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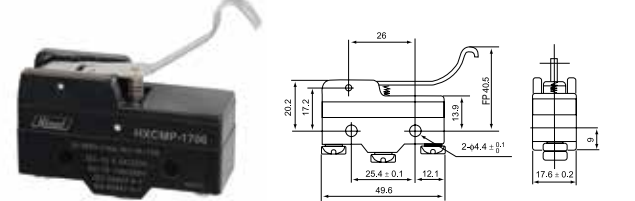
HXCMP-1704M



HXCMP-1705



HXCMP-1706



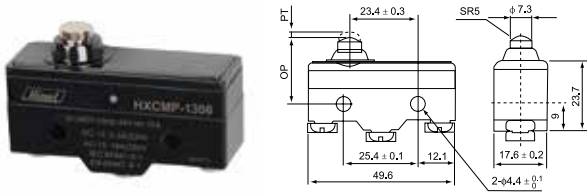
# HXC Limit Switch

Standard: EN60947-5-1

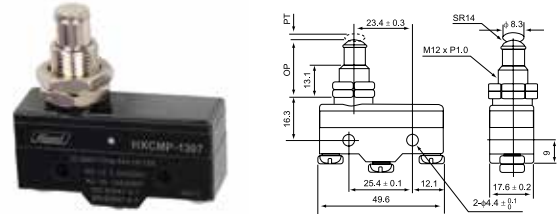


## Appearance and Dimension

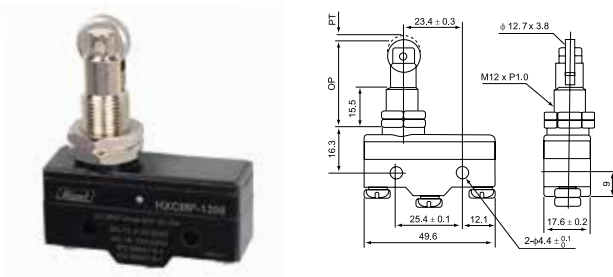
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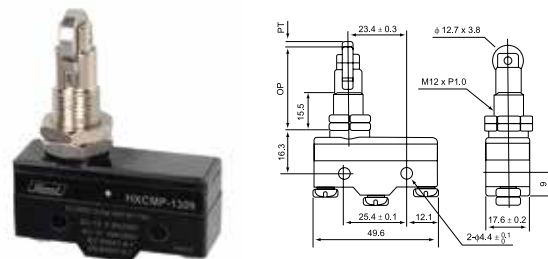
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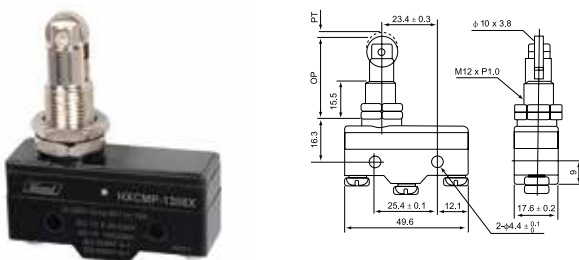
HXCMP-1308



HXCMP-1309



HXCMP-1308X



CAP-B



CAP-Y



CAP-C

