

Limit Switch

KXM Series

Part Number Description

KXM - ① ②

① Head Type	301 : Push Plunger	726 : Ø50 Adjustable Roller Lever - Rubber	
	302 : Roller Plunger	901 : Spring Rod	
	312 : Cross Roller Plunger	902 : Spring Wire	
	702 : Roller Lever	903 : Spring Rod - Plastic Tip	
	703 : Adjustable Roller Lever	923 : Spring Rod - Metal Tip	
	704 : Adjustable Rod Lever		
② Indicator Lamp	No mark : Standard (No Indicator)	D : LED Lamp (12 ~ 24VDC/AC)	A : Neon Lamp (100 ~ 240VAC)

General Specification




Contact Form	1N/O + 1N/C	
Contact Material	Ag alloy/24K Au Plate	
Rated Current	6A 250VAC · Resistance load	
Insulation Resistance	Min. 100MΩ 500VDC Insulation resistance	
Contact Resistance	Max. 25mΩ	
Dielectric Strength	1,500VAC · 50/60Hz 1 Minute	
Internal Voltage	Between the terminals	1,000VAC · 50/60Hz 1 Min.
	Between each terminal and non-charging parts	1,500VAC · 50/60Hz 1 Min.
Life Cycle	Mechanical	Min. 1,000,000
	Electrical	Min. 300,000
Vibration Resistance	10 ~ 55Hz dual wave length 1.5mm	
Shock Resistance	Malfunction	98m/s ² · Max. 10G
	Destruction	294m/s ² · Max. 30G
Degree Of Protection	IP66	
Ambient Temperature	-20 ~ +60°C · (with no icing)	
Ambient Humidity	Max. 90%RH	
Weight	Approx. 130 ~ 190g	

※ Be sure to use a band clip when using the IP66.

Contact Ratings	Voltage	Non-Inductive				Inductive			
		Resistive Load		Lamp Load		Motor Load		Inductive Load	
		NC(A)	NO(A)	NC(A)	NO(A)	NC(A)	NO(A)	NC(A)	NO(A)
125VAC		6	1.5	0.7	2	1	3		
250VAC		6	1	0.5	1.5	0.8	3		
500VAC		2	0.75	0.35	0.75	0.4	0.75		
30VDC		5	3		3		4		
125VDC	0.4	0.2	-		-		-		
250VDC									







Contact Block

Indication Lamp Name Plate

KXM-101	KXM-102	KXM-103
24K Au Plate	12 ~ 24VAC/DC LED Lamp	100 ~ 240VAC Neon Lamp
		





Product Selection

	Indicator Lamp	Part Number	Head Type	OF	RF	PT	MD	OT	TT
	Standard	KXM - 301	Push Plunger	900gf (8.83N)	150gf (1.47N)	1.5mm	0.7mm	4mm	5.5mm
	LED Lamp	KXM- 301D							
	Neon Lamp	KXM - 301A							
	Standard	KXM - 302	Roller Plunger	900gf (8.83N)	150gf (1.47N)	1.5mm	0.7mm	4mm	5.5mm
	LED Lamp	KXM - 302D							
	Neon Lamp	KXM - 302A							
	Standard	KXM - 312	Cross Roller Plunger	900gf (8.83N)	150gf (1.47N)	1.5mm	0.7mm	4mm	5.5mm
	LED Lamp	KXM - 312D							
	Neon Lamp	KXM - 312A							
	Standard	KXM - 702	Roller Lever	600gf (5.88N)	150gf (0.49N)	20°	10°	75°	95°
	LED Lamp	KXM - 702D							
	Neon Lamp	KXM - 702A							
	Standard	KXM - 703	Adjustable Roller Lever	800gf (7.84N) ~ 342gf (3.35N)	50gf (0.49N) ~ 21gf (0.21N)	20°	10°	75°	95°
	LED Lamp	KXM - 703D							
	Neon Lamp	KXM - 703A							
	Standard	KXM - 704	Adjustable Rod Lever	800gf (7.84N) ~ 230gf (1.99N)	50gf (0.49N) ~ 12gf (0.12N)	20°	10°	75°	95°
	LED Lamp	KXM - 704D							
	Neon Lamp	KXM - 704A							

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Product Selection

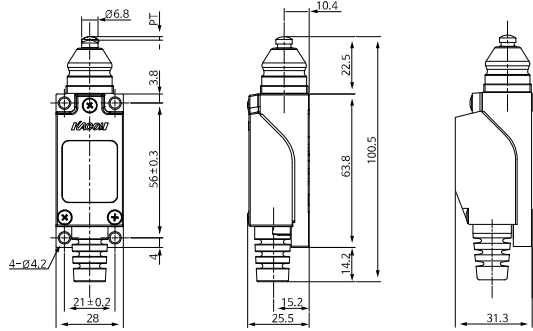
	Indicator Lamp	Part Number	Head Type	OF	RF	PT	MD	OT	TT
	Standard	KXM-726	Ø50 Adjustable Roller Lever Type	800gf (7.84N) ~ 342gf (3.35N)	50gf (0.49N) ~ 21gf (0.21N)	20°	10°	75°	95°
	LED Lamp	KXM-726D							
	Neon Lamp	KXM-726A							
	Standard	KXM-901	Spring Rod	90gf (0.88N)		30°		20°	50°
	LED Lamp	KXM-901D							
	Neon Lamp	KXM-901A							
	Standard	KXM-902	Spring Wire	90gf (0.88N)		30°		20°	50°
	LED Lamp	KXM-902D							
	Neon Lamp	KXM-902A							
	Standard	KXM-903	Spring Rod-Plastic Tip	90gf (0.88N)		30°		20°	50°
	LED Lamp	KXM-903D							
	Neon Lamp	KXM-903A							
	Standard	KXM-923	Spring Rod-Metal Tip	90gf (0.88N)		30°		20°	50°
	LED Lamp	KXM-923D							
	Neon Lamp	KXM-923A							

Dimension

unit : mm

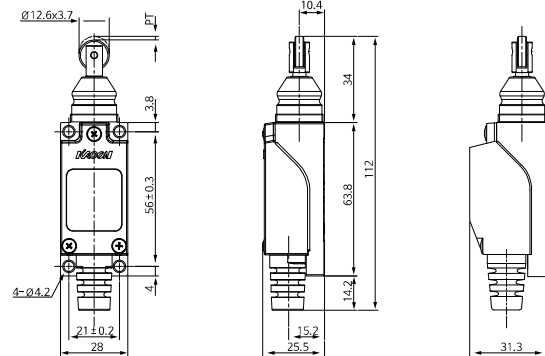
Push Plunger
KXM-301

Standard Type with Neon / LED Type



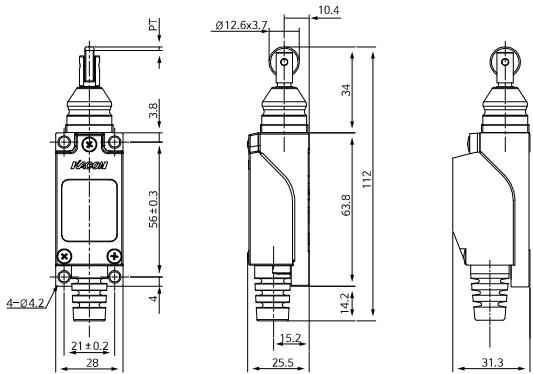
Roller Plunger
KXM-302

Standard Type with Neon / LED Type



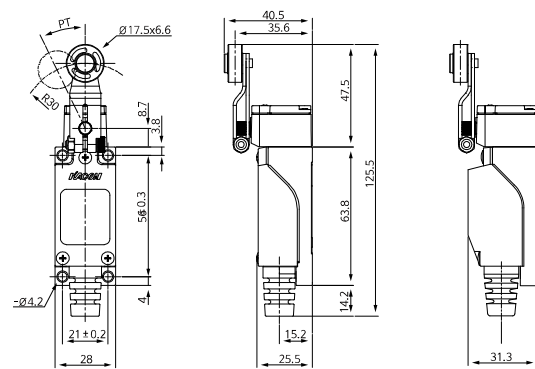
Cross Roller Plunger
KXM-312

Standard Type with Neon / LED Type



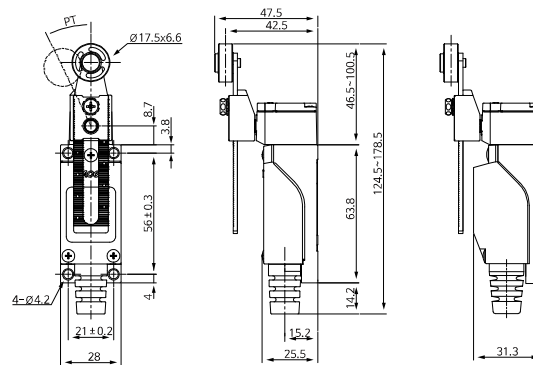
Roller Lever
KXM-702

Standard Type with Neon / LED Type



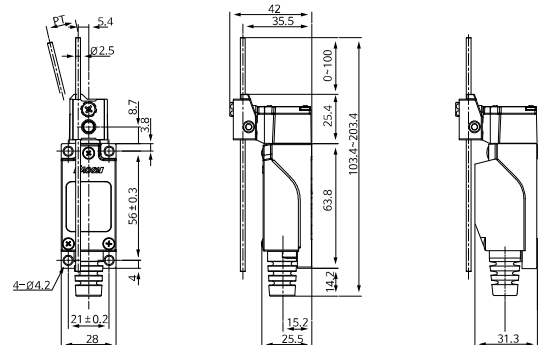
Adjustable Roller Lever
KXM-703

Standard Type with Neon / LED Type



Adjustable Rod Lever
KXM-704

Standard Type with Neon / LED Type



Limit Switch

KXM Series

Dimension

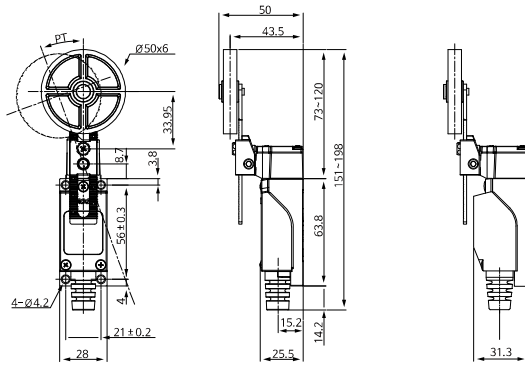
unit : mm

Ø50 Adjustable Roller Lever Type

KXM-726

Standard Type

with Neon / LED Type

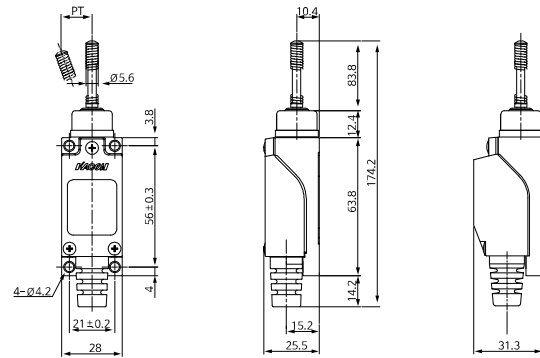


Spring Rod

KXM-901

Standard Type

with Neon / LED Type

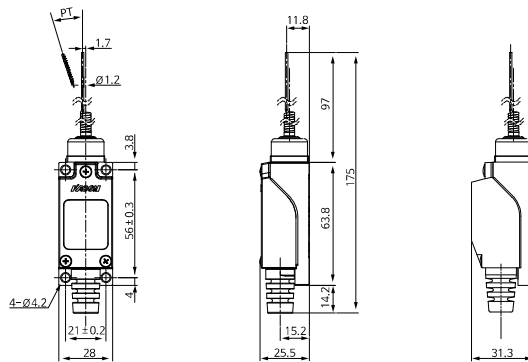


Spring Wire

KXM-902

Standard Type

with Neon / LED Type

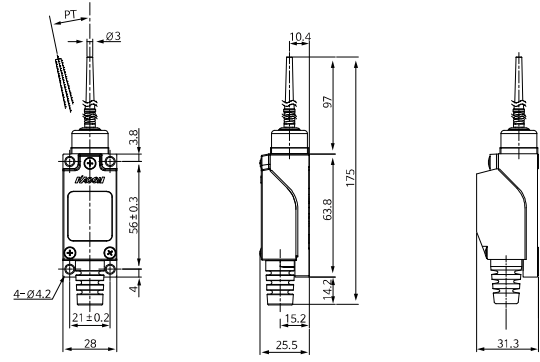


Spring Rod-Plastic Tip

KXM-903

Standard Type

with Neon / LED Type

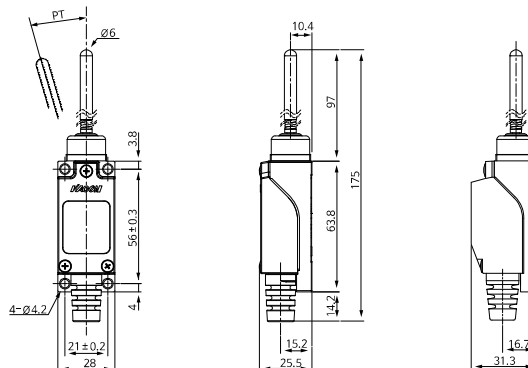


Spring Rod-Metal Tip

KXM-923

Standard Type

with Neon / LED Type



Operation indicator lamp Ratings

Indicator Lamp	Item		
	Rated voltage	Rated current	Order code
NEON lamp	80 ~ 240VAC	0.2 ~ 1.5mA	AC load: KXM - □A
LED lamp	12 ~ 24VDC	0.5 ~ 1.5mA	DC load: KXM - □D

- There are two types of lamps: Neon and LED lamps.
- The circuit check and fault detection are easy because the switch operation status is easily checked outside.
- This is ideal for the places where checking the passage of products is difficult on the conveyor line.
- The LED type has the + or - polarity. Pay attention to the polarity, which is indicated inside.
- The lens section of the indicator lamp cover ensures sufficient brightness with its diffusible resin diamond cut structure.
- The waterproof performance is excellent because the indicator lamp and cover are formed together.



Operation indicator lamp direction shift

- The lamp terminal does not require additional wiring, because it is connected via the spring in the indicator cover and the built-in switch terminal bolts.
- The indicator lamp can be selected between the modes of "ON in operation" and "ON in nonoperation".
- The indicator lamp can be shifted by removing the lamp holder inside the cover using tools including drivers.



Lamp holder removal



ON in operation

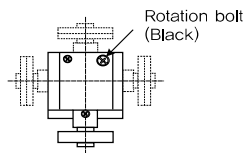


ON in non-operation

- The user can change the mode of operation status indication by changing the lamp holder mounting direction by 180° (up or down) inside the indicator lamp cover.
- The factory setting is "ON in operation"

Head mounting

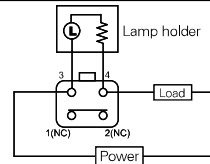
In the lever type, the head can be placed in one of four directions at 90° rotation interval.



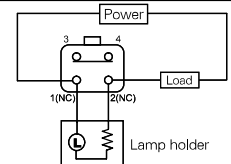
To change the head direction, loosen the black bolt on the top of the head, rotate the head, and tighten the bolt again.

Operation indicator lamp wiring and circuit diagram

Internal wiring



ON in non-operation
[Lamp ON when NC ON]

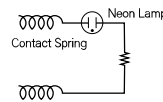


ON in operation
[Lamp ON when NO ON]

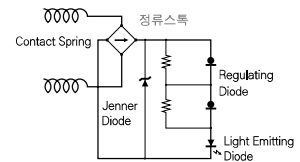
☞ Caution: Use the same power supply for terminals /
Connect the same polarity for terminals 1 and 4, and 2 and 3.

Diagram

NEON Lamp

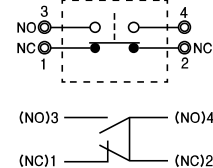
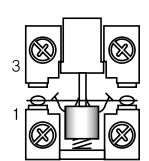


LED Lamp



Built-in switch circuit diagram

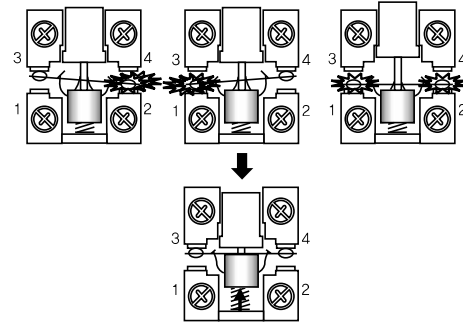
24K Au Plate



Direct contact opening ⇔ Direct Opening

1. The device is safe with the mechanism that cuts off the circuit when the switch contact weld occurs.
2. If the contact weld appears, the plunger directly pushes up the movable terminal to forcefully separate the NC contact and cut off the circuit.
3. The direct opening function is for the Nc contact only.
4. The plunger continues to push the movable terminal during operation, and the circuit is not cut off by mechanical impact.

Welding



Contact weld After direct opening

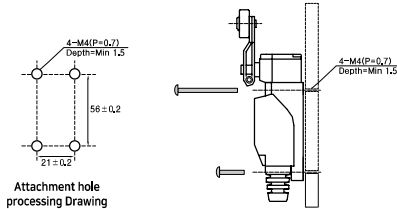
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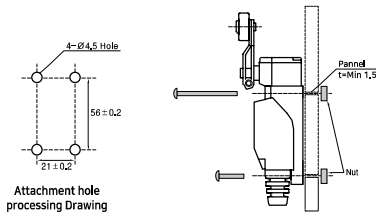
Mounting on the panel

1. This product can be mounted on the front or rear.
2. Before the installation of the product, determine its position so that the OT of the actuator is proper.
⇒ An excessive OT leads to a decrease in the product life due to the strong wear and fatigue
3. After determining the mounting position, refer to the following types to process the panel.
4. Be sure to use spring washers for the mounting bolts so that the product will not be removed by vibration or impact.

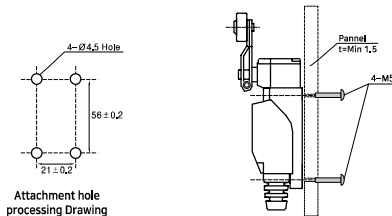
Type 1. Front Attached - Direct Tap Processing on the panel



Type 2. Front Attachment - Direct hole processing on the panel



Type 3. Rear Attachment - Using M5 Tap of the product



⇒ The bolts and nuts above are shipped together with the product.

Wires

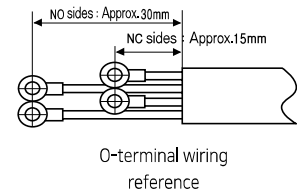
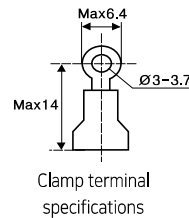
1. The proper size of wires that pass through the wiring lead-out (NBR) is $\varnothing 6.6 \sim \varnothing 8.5$.
2. The use of VCTF cable is desirable.
3. The following table shows the specifications of the VCTF cable. Refer to the table for cable selection.

Small Line Number	Conductor (L)	Completed outer diameter (I)
2 wire	0.75mm ²	$\varnothing 6.6\text{mm}$
	1.25mm ²	$\varnothing 7.4\text{mm}$
	2.0mm ²	$\varnothing 8.0\text{mm}$
3 wire	0.75mm ²	$\varnothing 7.0\text{mm}$
	1.25mm ²	$\varnothing 7.8\text{mm}$
	2.0mm ²	$\varnothing 8.5\text{mm}$
4 wire	0.75mm ²	$\varnothing 7.6\text{mm}$
	1.25mm ²	$\varnothing 8.5\text{mm}$



VCTF : The cable for 300 V or less indoor small appliances, which is manufactured by insulating stranded copper wires with PVC.

4. When wiring the switch terminals, do not directly connect the lead wire to the terminal, but use the O-type clamp terminal with insulation shielding.
5. After wiring, be sure to mount the cover before applying the power. Otherwise, it may lead to an electric shock.



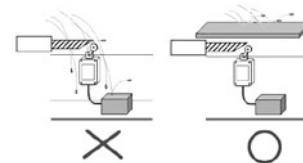
Tightening torque

When mounting the product, excessive force for bolts or nuts may damage the product. Observe the following tightening torques.

Front Attachment	M4- Max. 12kgf.cm / 1.2N.m
Rear Attachment	M5- Max. 19.6kgf.cm / 2.0N.m
Switch Terminal	M3- Max. 4.9kgf.cm / 0.5N.m

Environment

- Do not use the product under water or oil, nor in the environment where it is influenced by oil or water because this product is not completely oiltight.
- Do not use the product in the places where there are risks of fire and corrosion.
- Actual conditions may affect the product reliability including the guaranteed life and tightness.

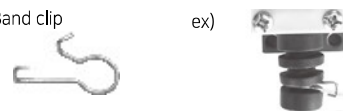


Basic Accessories

- Front attachment-M4x35 2EA, M4x20 2EA
- Rear Attachment-M5x10 4EA



- Band clip



Tighten the bottom wire outlet using a band clip.