

● OPERATING CHARACTERISTICS

Type	VZ-5104	VZ-5102	VZ-5106	VZ-5169	VZ-5108	VZ-5107	VZ-5105	VZ-5101
Operating characteristics								
OF (max.)	1,360g	2,720g	150g	29g	1,360g	142g	1,200g	2,720g
RF (min.)	227g	910g	—	—	227g	28g	—	910g
PT (max.)	20°	1.7mm	28mm	28mm	20°	20°	55°	1.7mm
OT (min.)	30°	5.6mm	—	—	30°	30°	35°	6.4mm
MD (max.)	12°	1mm	—	—	12°	12°	—	1mm
TF (max.)	2,720g	—	—	—	2,720g	200g	—	—
TT (min.)	50°*	44 ± 0.8mm	—	—	50°*	50°*	OP: 90 ± 10°	OP: 34 ± 0.8mm

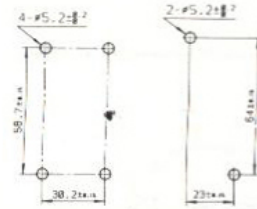
Type	VZ-5104-2	VZ-5108-2	VZ-5107-2	VZ-5104-2N	VZ-5108-2N	VZ-5107-2N
Operating characteristics						
OF (max.)	900g	900g	245g	980g	980g	270g
RF (min.)	50g	50g	14g	120g	120g	30g
PT (max.)	30°	30°	30°	20°	20°	20°
OT (min.)	60°	60°	60°	70°	70°	70°
MD (max.)	16°	16°	16°	10°	10°	10°
TF (max.)	—	—	—	1,260g	1,260g	350g

● Mounting holes

Basic type and-2 SERIES

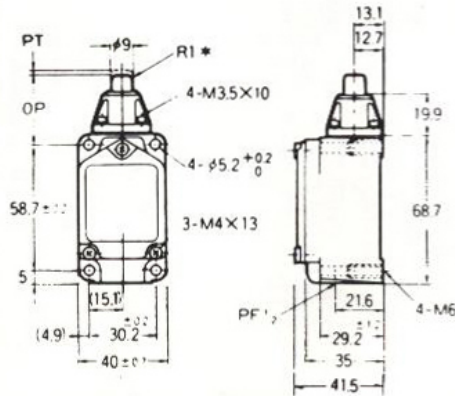


-2N SERIES

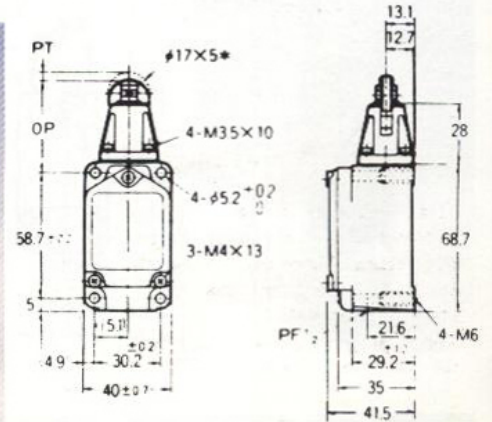


■ DIMENSIONS (Unless otherwise specified, a tolerance of ±0.4mm applies to all dimensions)

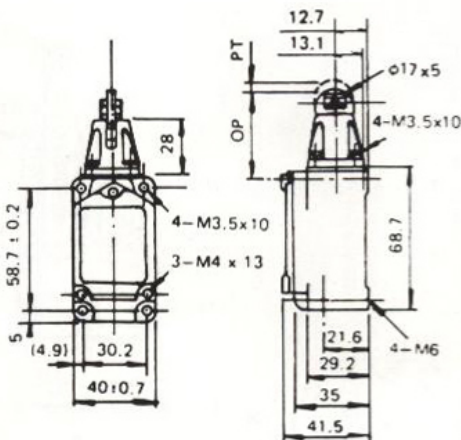
VZ-5101



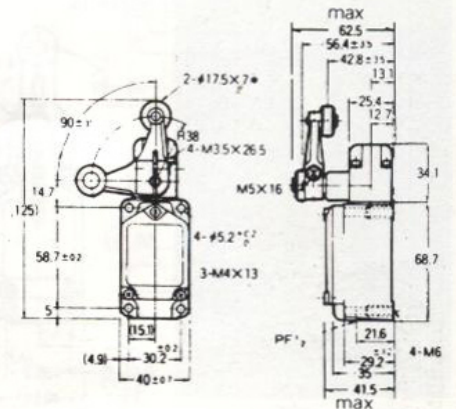
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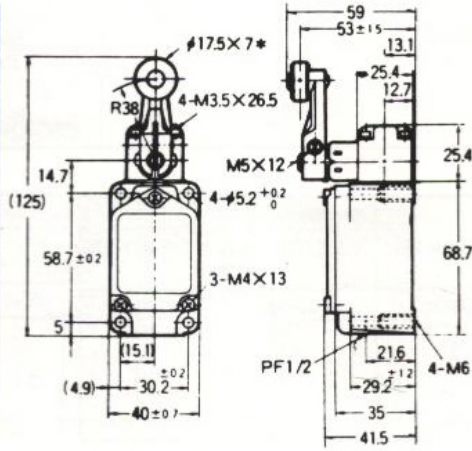
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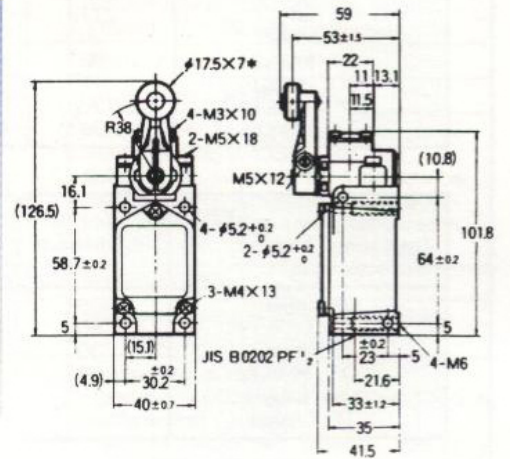
VZ-5105 VZ-5125 VZ-5135



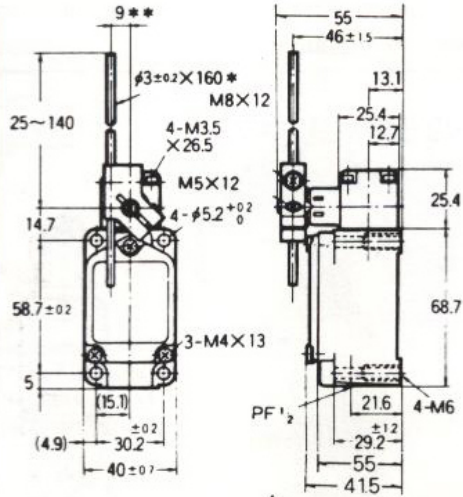
VZ-5104
VZ-5104-2



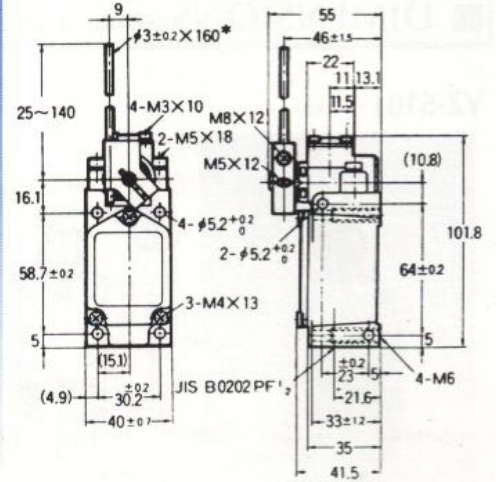
VZ-5104-2N



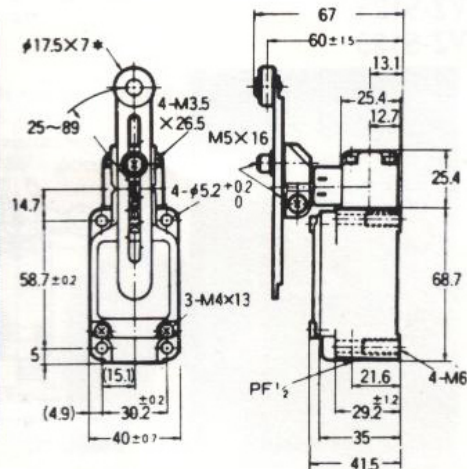
VZ-5107
VZ-5107-2



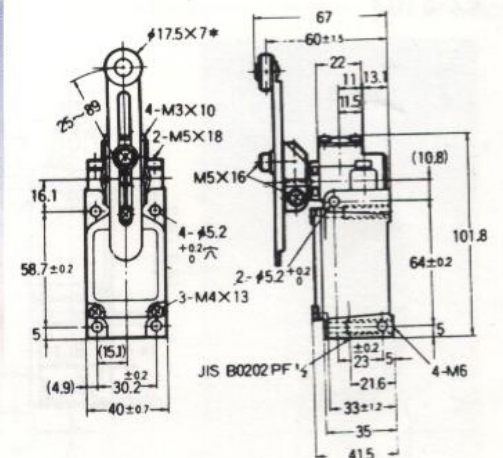
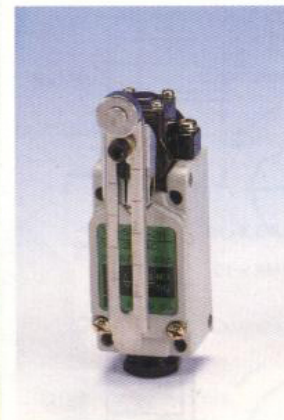
VZ-5107-2N



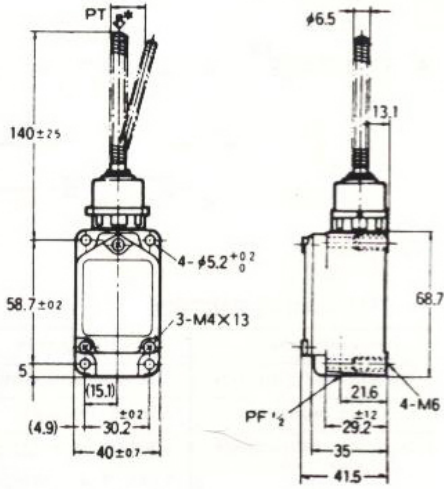
VZ-5108
VZ-5108-2



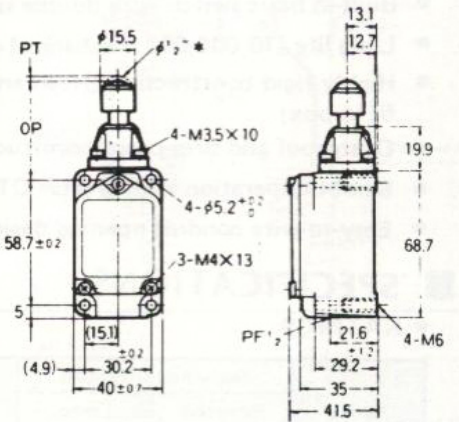
VZ-5108-2N



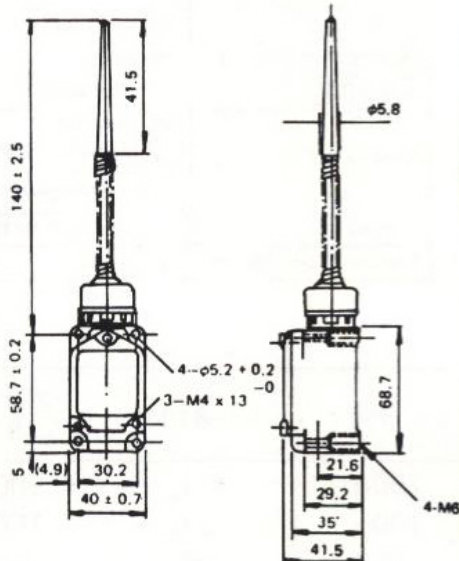
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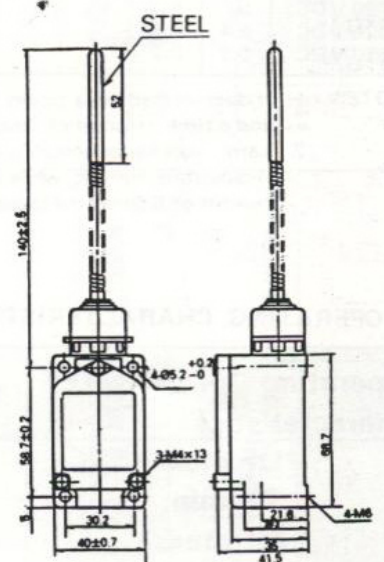
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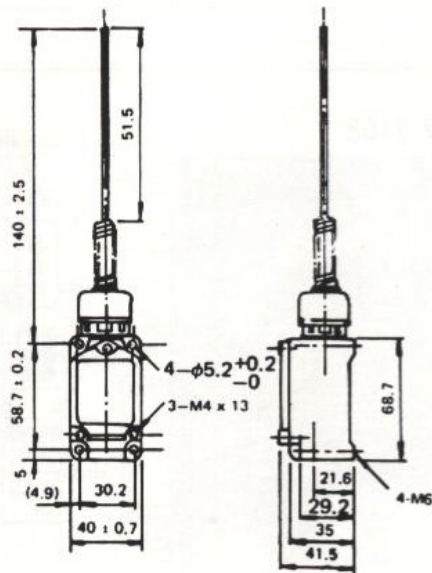
VZ-5166



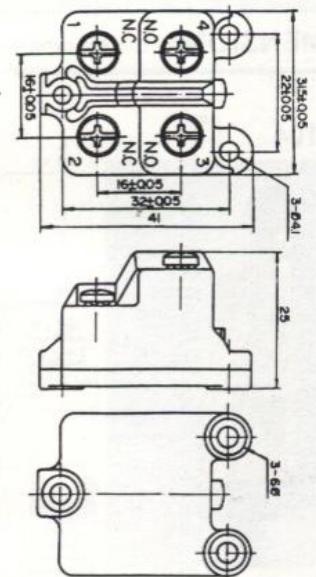
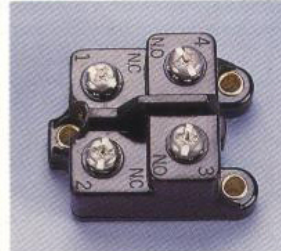
VZ-5168



VZ-5169



VZ-501



Wide Selection of Two-circuit Double-break Limit Switches

FEATURES

- Rigid diecast switch housing
- Set position indicator plate for easy maintenance
- High mechanical strength
- Oiltight, waterproof and dust-proof construction

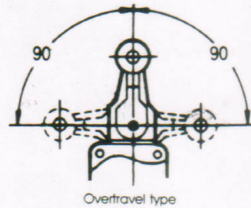
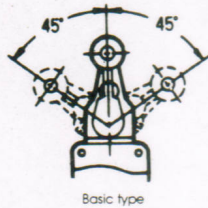
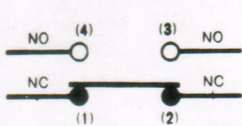
SPECIFICATIONS

RATINGS

Rated voltage (V)	Non-inductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.
125 VAC	10	10	3	1.5	10	5	3	2.0
250 VAC	5	5	2	1	5	3	3	1.0
480 VAC	3	3	1.5	0.8	3	1.5	1.5	0.8
600 VAC	1	1	1	0.5	1.5	1	1	0.5
8 VDC	10		6	3	10		6	
14 VDC	10		6	3	10		6	
30 VDC	6		4	3	6		4	
125 VDC	0.8		0.2	0.2	0.8		0.2	
250 VDC	0.4		0.1	0.1	0.4		0.1	

- Notes: 1. Inductive load: power factor=0.4; time constant=7msec.
 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.

CONTACT CONFIGURATION



OVERTRAVEL TYPE

The Overtravel Type is a limit switch which is provided with a greater OT to facilitate dog setting. Since this type is identical to the Basic Type in dimensions, both types are interchangeable.

The Overtravel Type is classified into two versions -2 series and -2N series.

-2 SERIES

The head of -2 series switch can be installed in any of the four directions.

- 90° operation on only one side — impossible
- 90° operation on either side — possible

-2N SERIES

The head of -2N series switch can be installed only in two directions, forward and backward.

- 90° operation on only one side — possible
- 90° operation on either side — possible



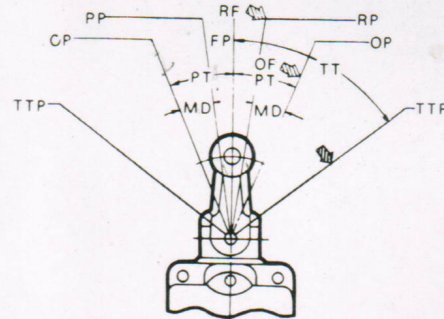
Loosen the cam holder with a coin or screw driver.

Reverse the cam

Reverse the position of the cam and reinstall.

CHARACTERISTICS

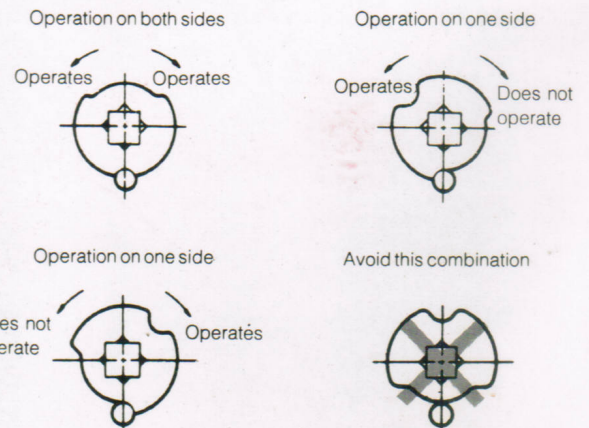
Operating speed	1mm to 2m/sec (with Type WLCA2)
Operating frequency	Mechanically: 120 operations/min. Electrically: 30 operations/min.
Contact resistance	15mΩ max. (initial).
Insulation resistance	100MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals; 2,200 VAC, 50/60Hz for 1 minute between each terminal and non-current-carrying metal part and between each terminal and ground
Temperature rise	50 degrees max.
Vibration	Malfunction durability: 10 to 55Hz; 1.5mm double amplitude
Shock	Mechanical durability*: approx. 1,000m/sec ² (approx. 100G's) Malfunction durability*: approx. 300m/sec ² (approx. 30G's)
Ambient temperature	Operating: -50 to +80°C
Humidity	95% RH max.
Service life	Mechanically: 15,000,000 operations min. Electrically: 500,000 operations min.
Weight	Approx. 275g (with Type TZ-5104)
Degree of protection	IEC 529 class IP67



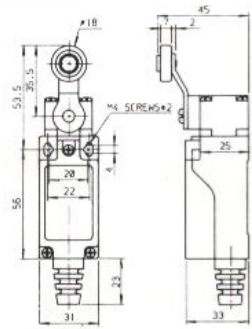
- OF: Operating Force
- RF: Releasing Force
- TF: Total Force
- FP: Free Position
- OP: Operating Position
- RP: Releasing Position
- TTP: Total Travel Position
- PT: Pretravel
- OT: Overtravel
- MD: Movement Differential
- TT: Total Travel

90° operation on one side is possible by simply changing the direction of the cam.

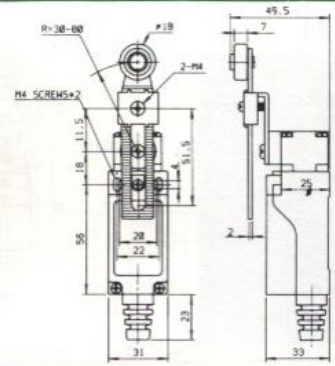
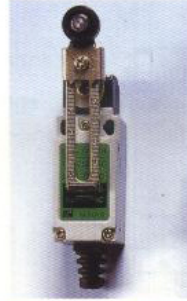
Relationship of cam to operation as observed from the rear of switch



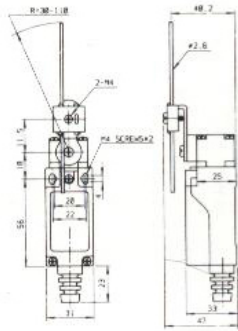
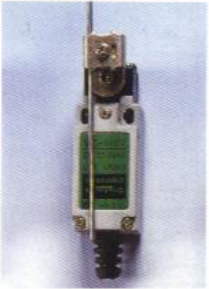
VZ-9104



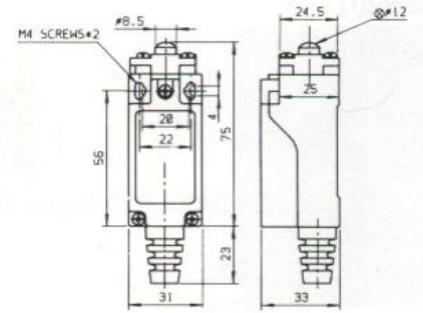
VZ-9108



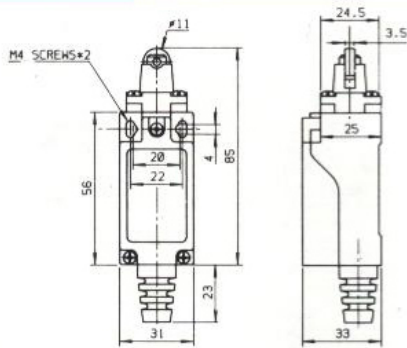
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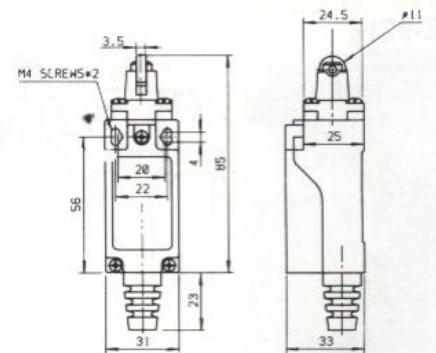
VZ-9111



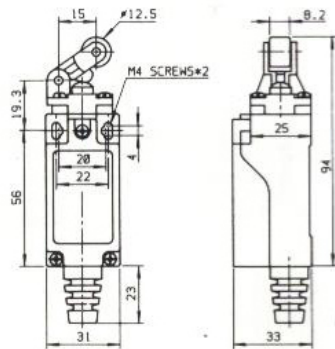
VZ-9112



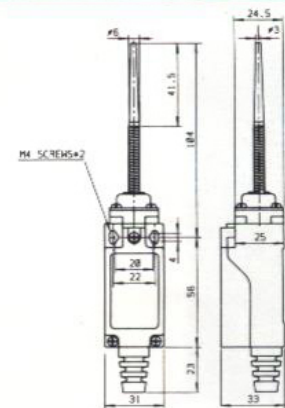
VZ-9122



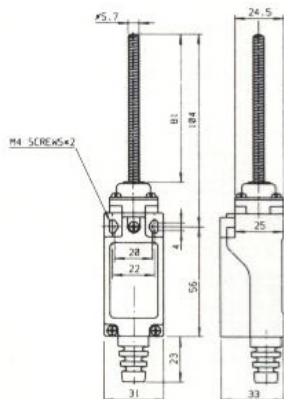
VZ-9124



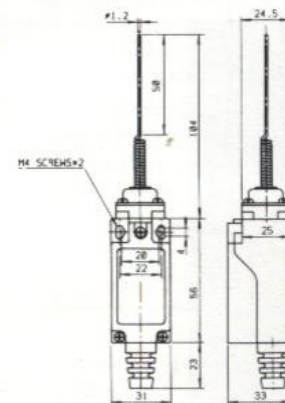
VZ-9166



VZ-9167

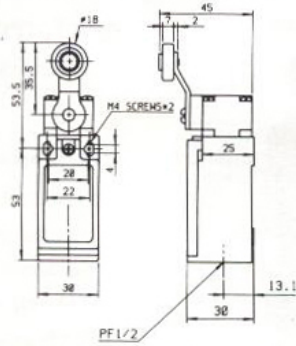


VZ-9169

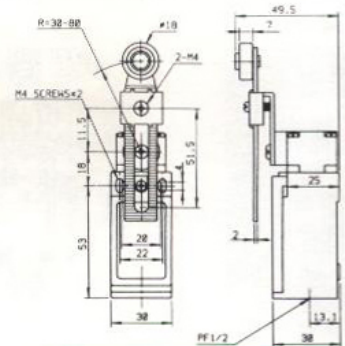
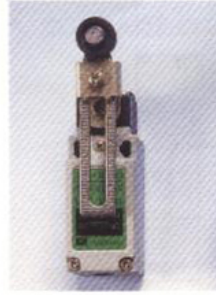


■ DIN EN50047

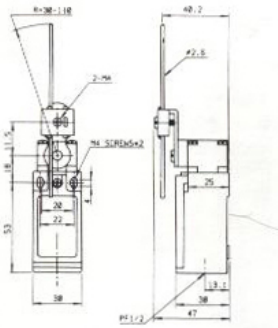
VZ-9204



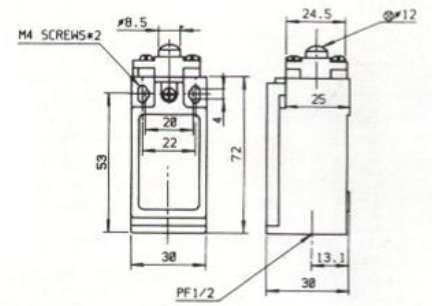
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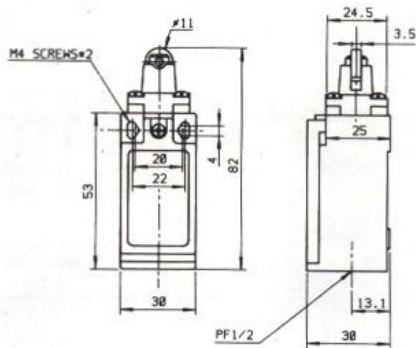
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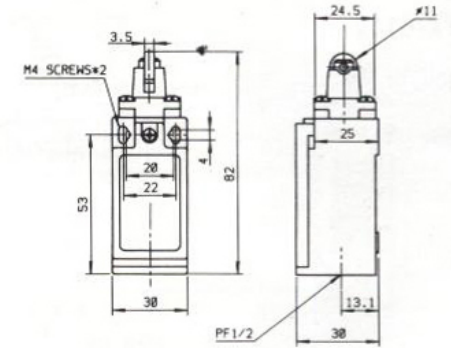
VZ-9211



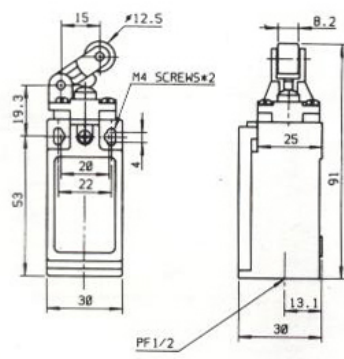
VZ-9212



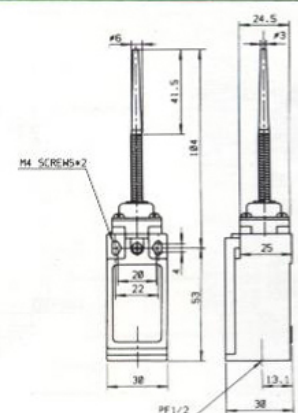
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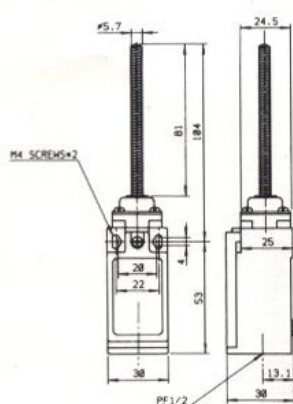
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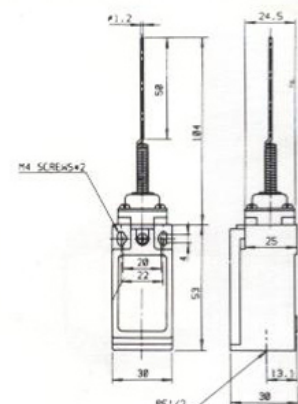
VZ-9266



VZ-9267



VZ-9269



Economical, Miniature Limit Switch Boasting Rigid Construction

VZ-92SERIES are DIN EN50047.

FEATURES

- Built-in basic switch with double spring mechanism
- Long life (10,000,000 mechanical operations)
- Material: Glass reinforced plastic.
- Dustproof and drip-proof construction
- Smooth operation with greater OT
- Easy-to-wire conduit opening design

SPECIFICATIONS

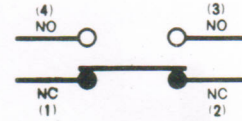
RATINGS

Rated voltage	Non-inductive load				Inductive load			
	Resistive load		Lamp load		Inductive load		Motor load	
	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.
125 VAC	5	5	1.5	0.7	3	3	2	1
250 VAC	5	5	1	0.5	3	3	1.5	0.8
8 VDC	5	5	3	3	5	4	3	3
14 VDC	5	5	3	3	4	4	3	3
30 VDC	5	5	3	3	4	4	3	3
125 VDC	0.4	0.4						
250 VDC	0.2	0.2						

- NOTES: 1. Inductive load has a power factor of 0.4 min. (AC) and a time constant of 7msec. 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.

■ 5A 250 VAC

● CONTACT CONFIGURATION



Operating speed	5mm to 50cm/s
Operating frequency	120 operations/min
Contact resistance	25mΩ (initial)
Insulation resistance	100MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals 1,500 VAC, 50/60Hz for 1 minute between current-carrying and non-current-carrying parts and between each terminal and ground
Vibration	10 to 55Hz, 1.5mm double amplitude
Shock	Approx. 300m/s ² (approx. 30G's)
Ambient temperature	Operating: -5 to +65°C
Humidity	95% RH max.
Service life	Mechanically: 10,000,000 operations min. Electrically: 500,000 operations min.
Weight	Approx. 130 to 190g
Degree of protection	IEC 529 class IP65

OPERATING CHARACTERISTICS

TYPE	VZ-9104	VZ-9108	VZ-9107	VZ-9111	VZ-9112 VZ-9122	VZ-9124	VZ-9166 VZ-9167 VZ-9169
	VZ-9204	VZ-9208	VZ-9207	VZ-9211	VZ-9212 VZ-9222	VZ-9224	VZ-9266 VZ-9267 VZ-9269
OF max.	500 g	450g	450g	700 g	700 g	450 g	150 g
RF min.	50 g	40g	40g	150 g	150 g	80 g	—
PT max.	18° ~ 28°	18° ~ 28°	18° ~ 28°	2mm	2mm	4mm	30mm
OT min.	30°	30°	30°	4mm	4mm	5mm	—
MD max.	14°	14°	14°	0.8mm	0.8mm	1.6mm	—
OP	—	—	—	18 ± 0.5mm	28.2 ± 0.8mm	37 ± 0.8mm	—

VG-20 CABLE GLAND ACCESSORY OF VZ-92 SERIES

Diameter of Cables: φ7~13mm

