

■ SPECIFICATIONS

● RATINGS

Rated Voltage (V)	Non-inductive load(A)				Inductive load (A)				Inrush Current (A)	
	Resistive Load		Lamp Load		Inductive load		Motor Load			
	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	5		1.5		3		2		1	
250 VAC	5		1.5		3		1		0.5	
8 VDC	5		-		1.5		-		10 max. 10 max.	
14 VDC	5		-		1.5		-			
30 VDC	5		-		1.5		-			
125 VDC	0.5		-		0.05		-			
250 VDC	0.25		-		0.03		-			

● CHARACTERISTICS

Operating Speed	0.01mm to 1m/sec(Plunger Type)
Operating Frequency	Mechanically: 240 operations/min Electrically: 20 operations/min
Contact Resistance	15mΩ max. (initial)
Insulation Resistance	100MΩ min. (at 500VDC)
Dielectric Strength	1,000 VAC, 50/60Hz, for 1 minute between non-continuous terminals; 1,500 VAC, 50/60 Hz, for 1 minute between current-carrying metal part and ground.
Vibration	(*10~20HZ): 1.5mm double amplitude Malfunction durability: 10~55Hz
Shock	Mechanically durability: 1,000m/Sec ² (approx. 100G'S) Malfunction durability: 300m/Sec ² (approx. 30G'S)
Ambient Temperature	-10°C ~ +80°C (Not freezing)
Humidity	Max. 95%RH
Service Life	Mechanically: 10,000,000 operations min. Electrically: 500,000 operations min.
Weight	About 22 to 58g
Degree of Protection	Sealed: (IEC) IP67

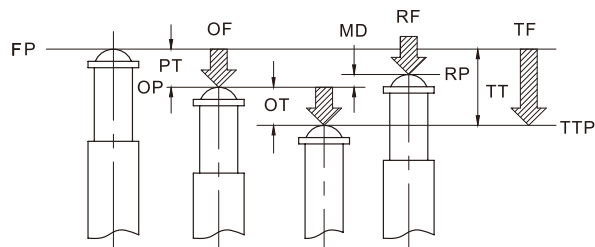
■ OPERATING CHARACTERISTICS

Type	TZ-2311	TZ-2312
OF max.	1200g	1200g
RF min.	500g	500g
PT max.	1.5mm	1.5mm
OT min.	3mm	3mm
MD max.	(0.1mm)	(0.1mm)
OP	0.8±0.8	31.4±0.8

● CONTACT CONFIGURATION



● DEFINITIONS OF OPERATING CHARACTERISTICS



Operate

Release

OF: Operating Force

TTP: Total Travel Position

RF: Releasing Force

PT: Pre Travel

TF: Total Force

OT: Over Travel

FP: Free Position

MD: Movement Differential

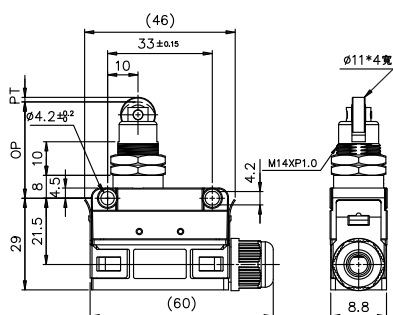
OP: Operating Position

TT: Total Travel

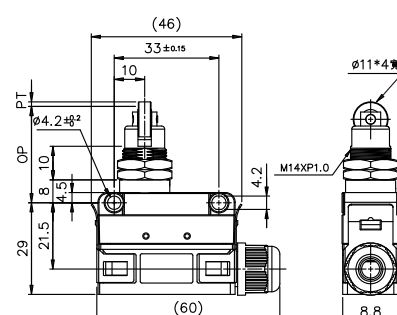
RP: Releasing Position

■ APPEARANCE and DIMENSIONS

TZ-2311

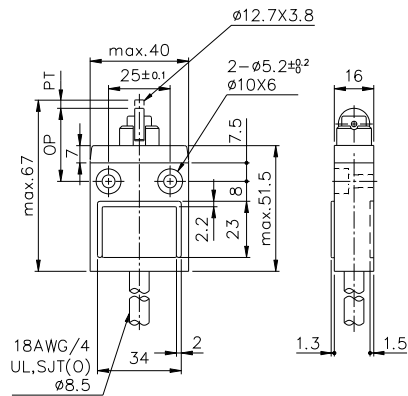


TZ-2312

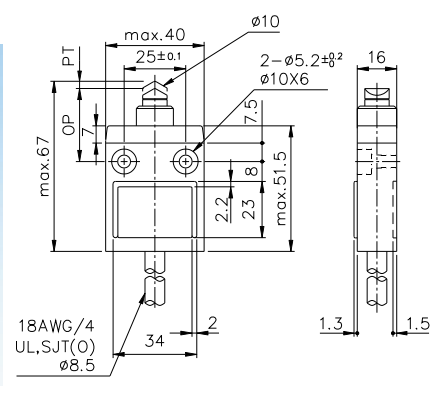


DIMENSIONS

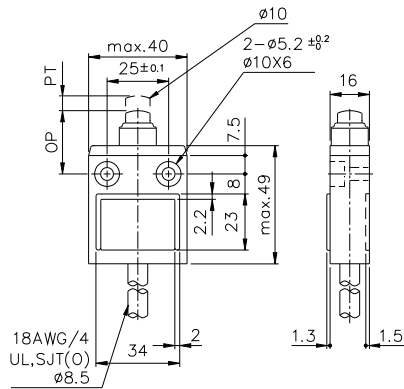
TZ-3103



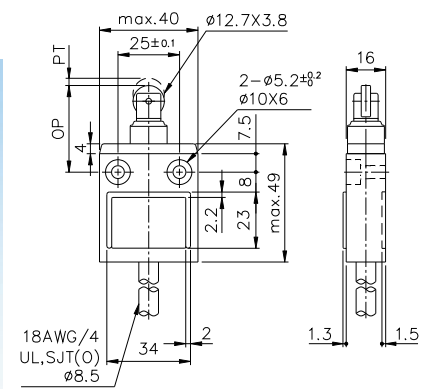
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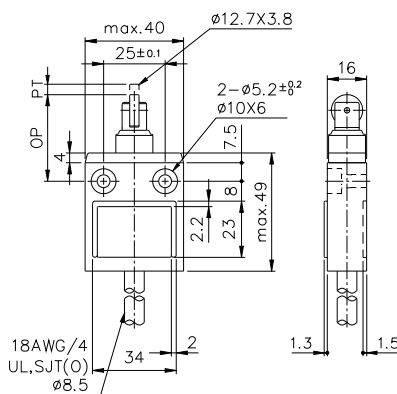
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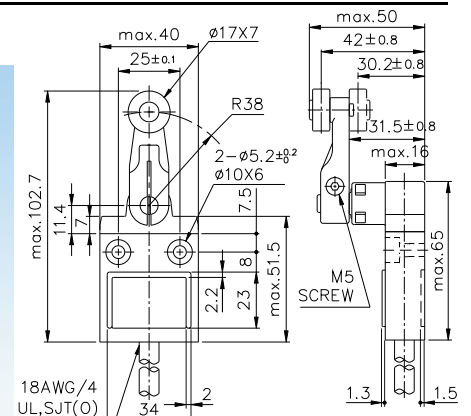
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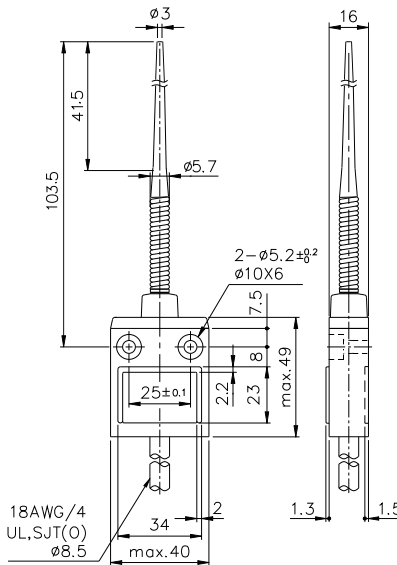
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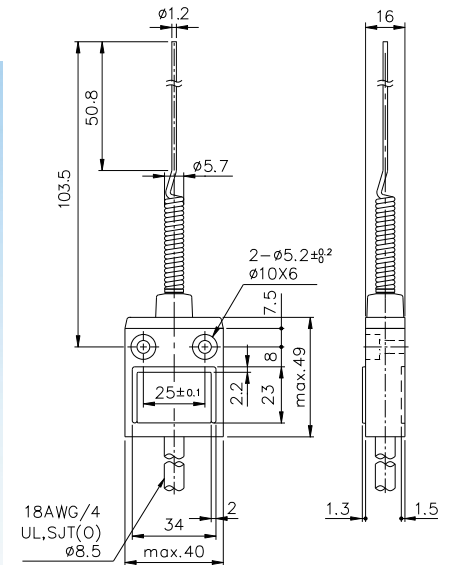
TZ-3104



TZ-3166

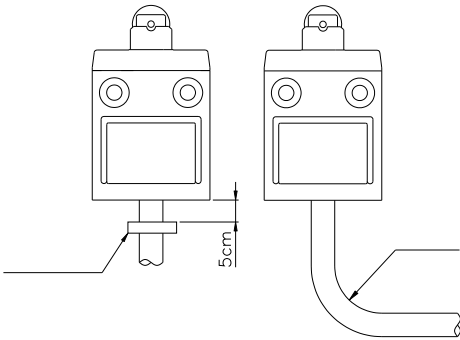


TZ-3169

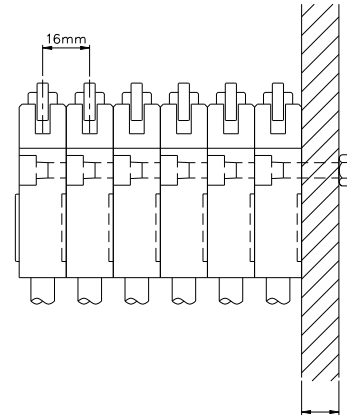


FASTENING OF THE SWITCH CABLE

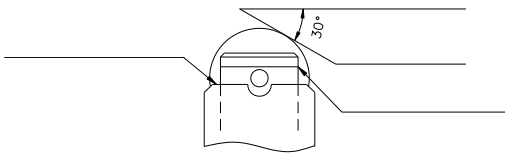
The switch bodies are filled with resin for sealing purposes. To avoid stressing the cable and switch body, fasten the cable at 5cm or farther away from the switch body, should the wire be bent, the bending radius shall be least 45mm.



SWITCH BANK MOUNTING



The service life and accuracy of switches will be effected by the shape of actuator operation frequency & over travel. So the angular of the fixing level should be about 30°, the surface finish of the fixing level should be over $\nabla\nabla\nabla$, the hard hardness is from hv400~500. When installing, the position of the concave part should be above the standard panel.

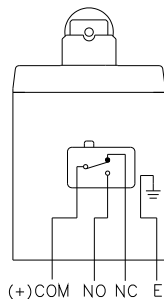


MOUNTING

Recommended tightening torque according to the following form.

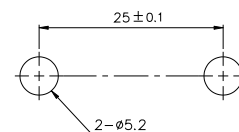
1	M5 fastening screws	4.9~5.88N.m (50~60kgf.cm)
2	M3.5 installing screws	0.78~0.88N.m (8~9kgf.cm)

CONTACT TYPES



MOUNTING HOLES

mount the switch body to a rigid mounting panel using two m5 screws.

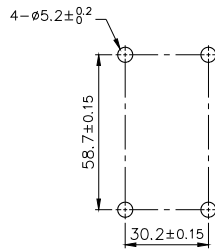


OPERATING CHARACTERISTICS

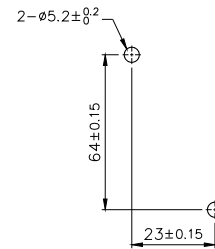
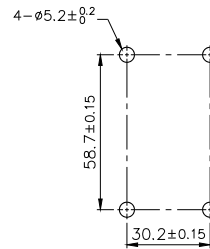
Type	TZ-5101	TZ-5102	TZ-5109	TZ-5104	TZ-5108	TZ-5107	TZ-5105
OF max.	2,720g	2,720g	2,720g	1,360g	1,360g	142g	1,200g
RF min.	910g	910g	910g	227g	227g	28g	-
PT max.	1.7mm	1.7mm	1.7mm	20°	20°	20°	55°
OT min.	6.4mm	5.6mm	4mm	30°	30°	30°	35°
MD max.	1mm	1mm	1mm	12°	12°	12°	-
OP	34±0.8mm	44.8±0.8mm	44.5±0.8mm	-	-	-	90±10°
TTP max.	29.5mm	39.5mm	41mm	-	-	-	-

Type	TZ-5106.5166.5168.5169	TZ-5104-2.5108-2	TZ-5107-2	TZ-5104-2N.5108-2N	TZ-5107-2N
OF max.	150g	1000g	290g	980g	290g
RF min.	-	100g	25g	120g	25g
PT max.	28mm	20°	20°	20°	20°
OT min.	-	55°	55°	70°	70°
MD max.	-	12°	12°	10°	10°

Mounting holes Basic type and -2 SERIES

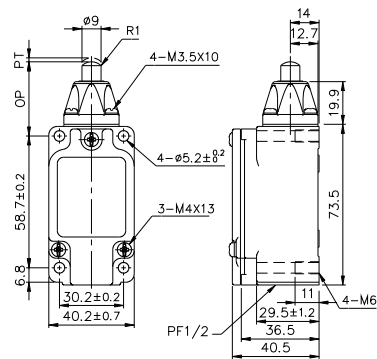


-2N SERIES

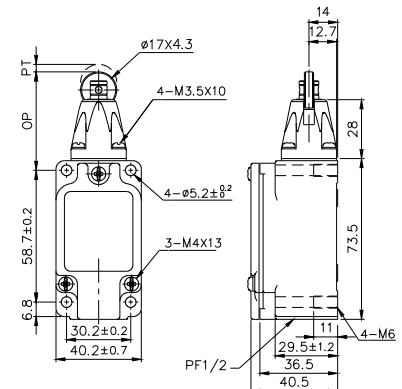


DIMENSIONS

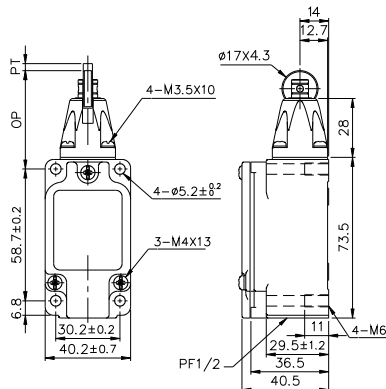
TZ-5101



TZ-5102

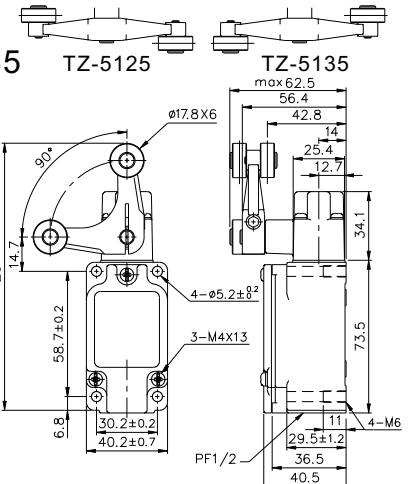


TZ-5103

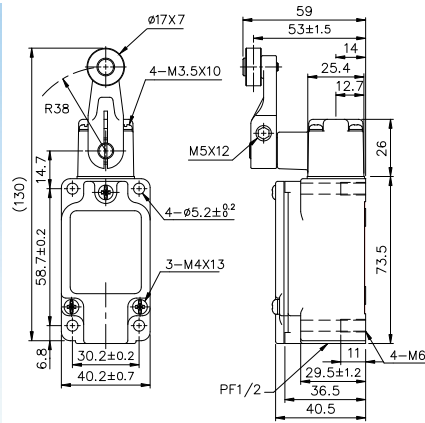


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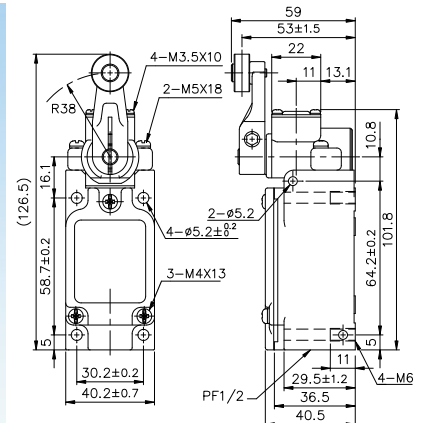
TZ-5125 TZ-5135



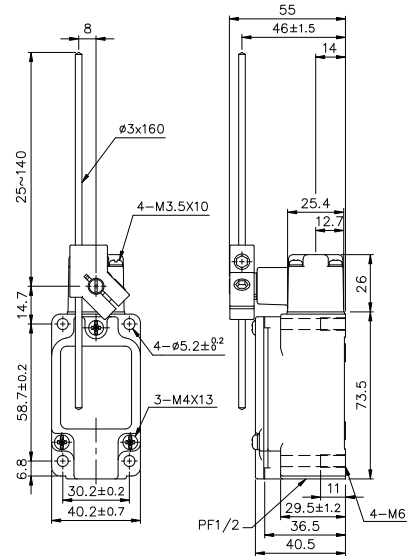
TZ-5104
TZ-5104-2



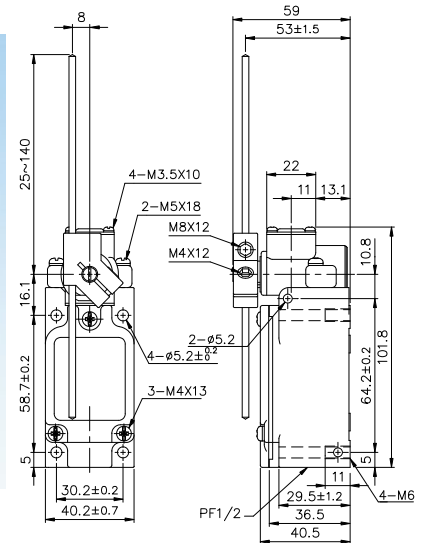
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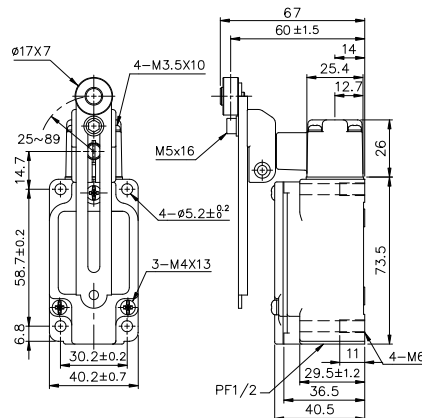
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TZ-5107-2



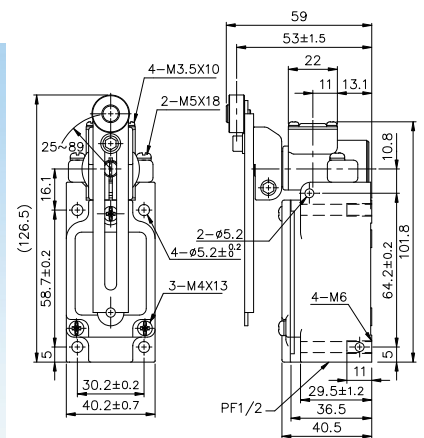
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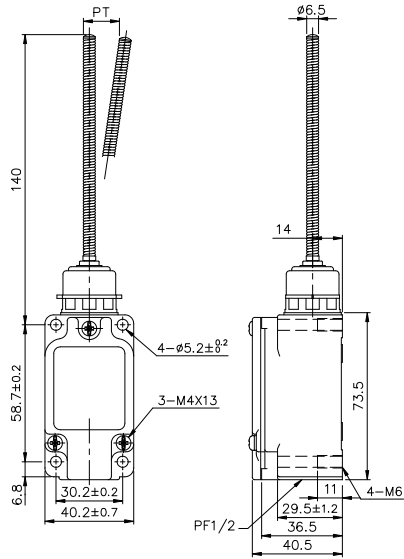
TZ-5108
TZ-5108-2



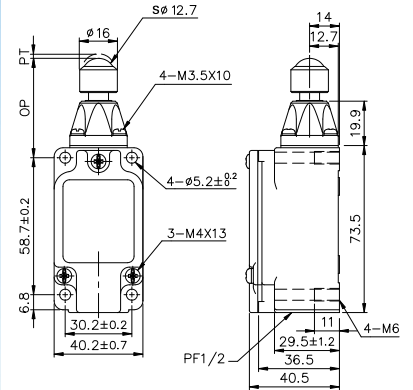
TZ-5108-2N



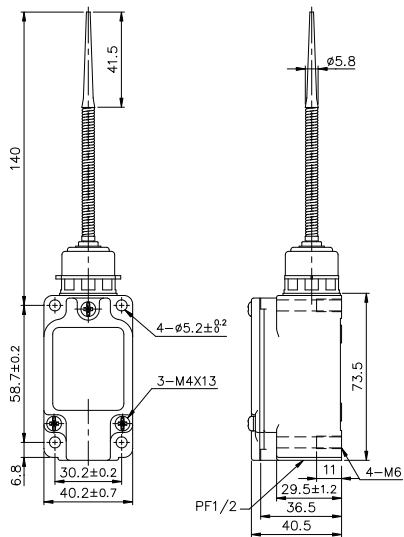
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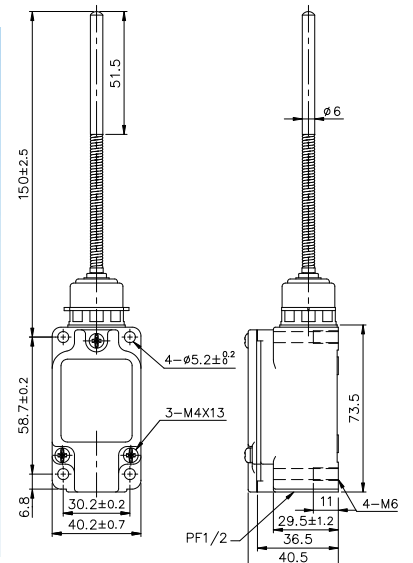
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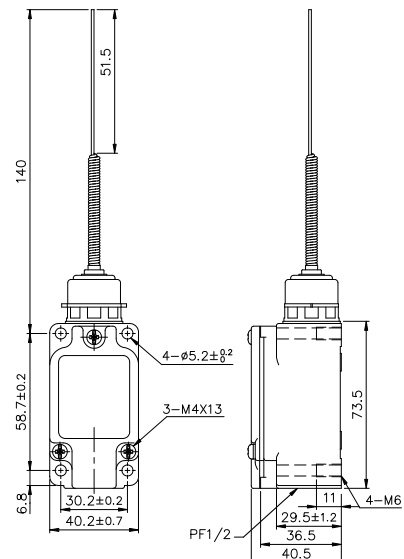
TZ-5166



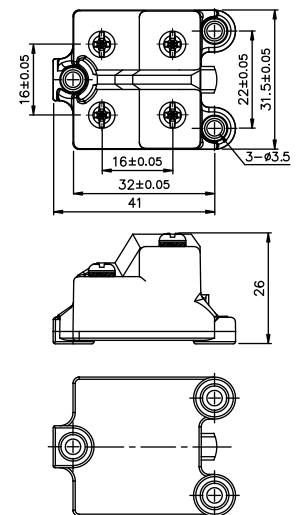
TZ-5168



TZ-5169



TZ-501



tend ENCLOSED SWITCH

TZ-6

Long Service Life and Large Breaking Capacity

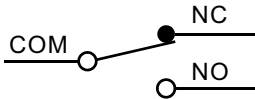


FEATURES

- Models TZ-6 incorporate Model TM Micro Switches with rugged die cast cases.
- Available with various types of built-in switches (including split contact type ,maintained operation type , magnetic blowout type) and various actuators.
- Degree of Protection: IEC IP 65

SPECIFICATIONS

- CHARACTERISTICS
THE SAME AS MICRO SWITCH
SEE P. TB 1
- CONTACT CONFIGURATION



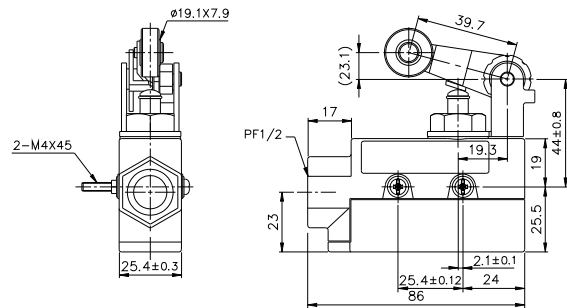
OPERATING CHARACTERISTICS

Type	TZ-6001	TZ-6002	TZ-6003	TZ-6004	TZ-6043
OF max.	350g	350g		570g	570g
RF min.	114g	114g		170g	170g
PT max.	0.4mm	0.5mm		4mm	4mm
OT min.	5.5mm	3.6mm		6mm	6mm
MD max.	0.05mm	0.05mm		0.4mm	0.4mm
OP	38.2±0.8mm	49.7±1mm			

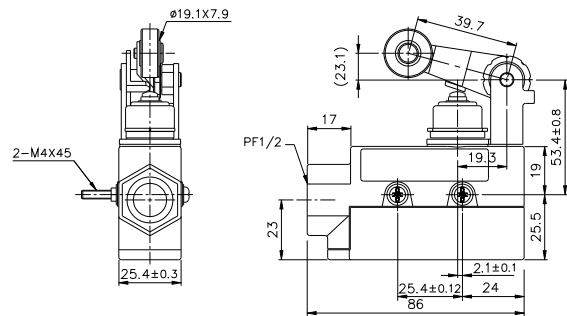
Type	TZ-6101	TZ-6102	TZ-6103	TZ-6104	TZ-6143
OF max.	800g	500g		640g	640g
RF min.	240g	100g		230g	230g
PT max.	2mm	1mm		5mm	5mm
OT min.	5mm	3.5mm		6mm	6mm
MD max.	0.1mm	0.12mm		0.4mm	0.4mm
OP	45.8±0.8mm	49.7±0.8mm			

DIMENSIONS

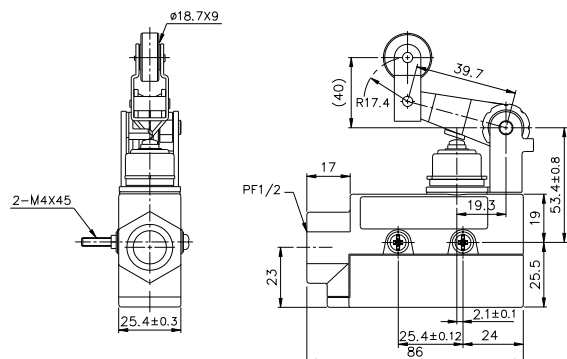
TZ-6004



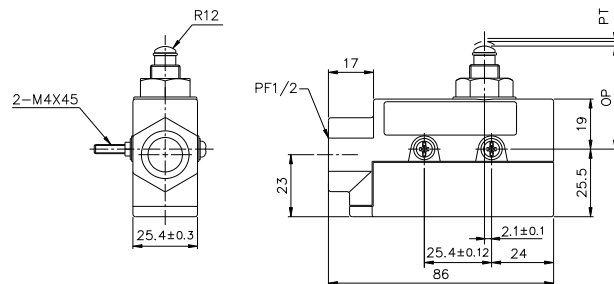
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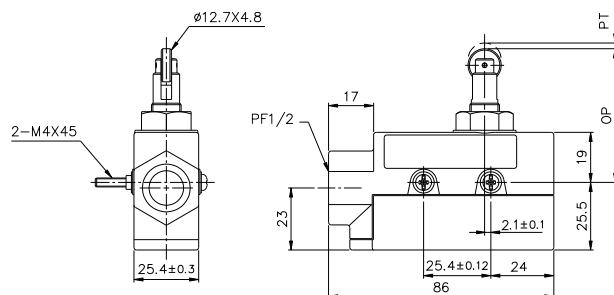
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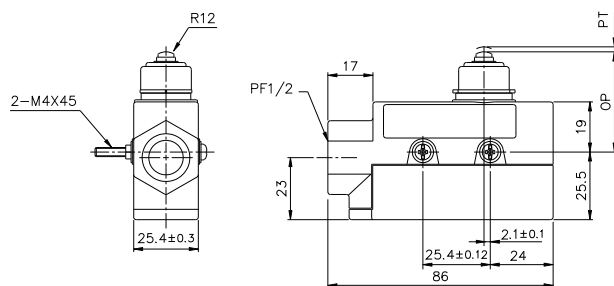
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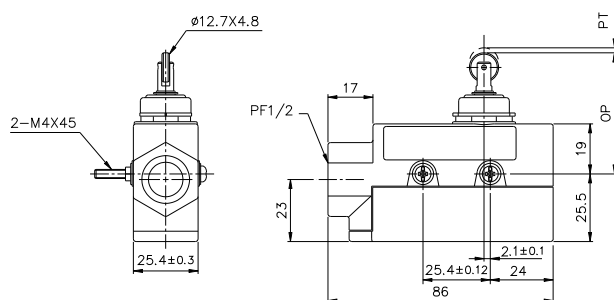
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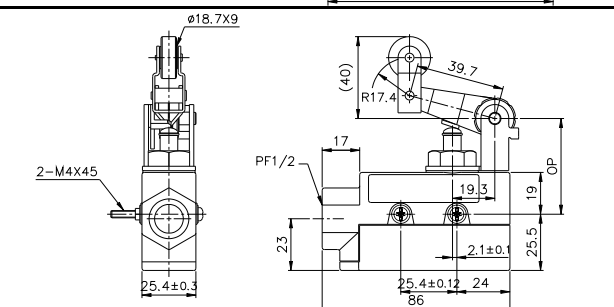
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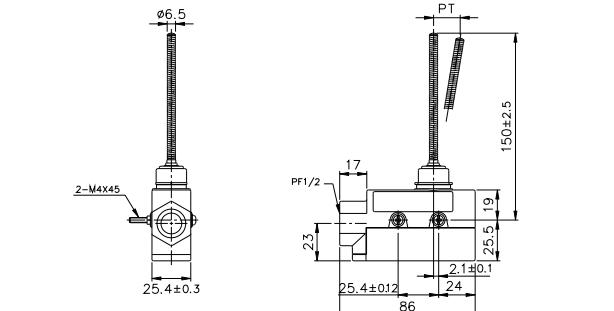
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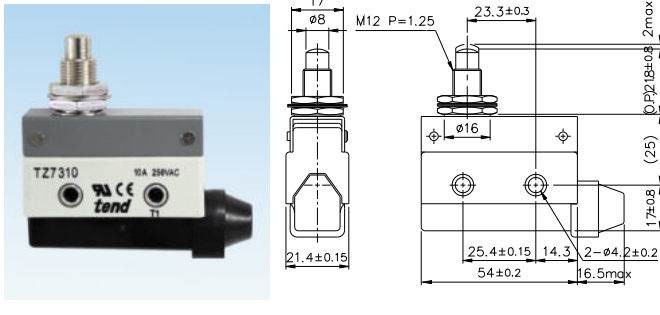
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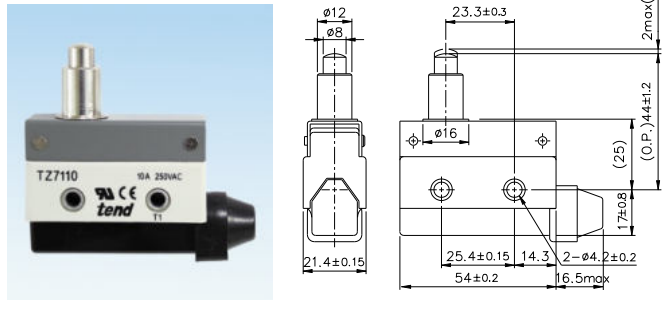
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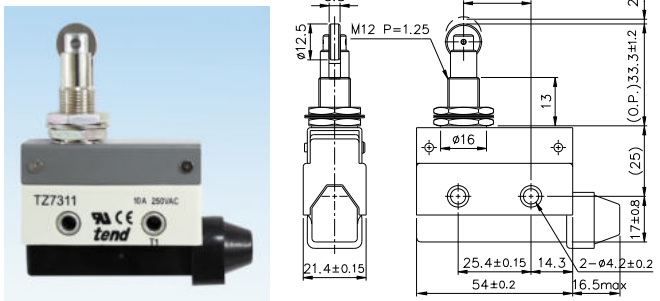
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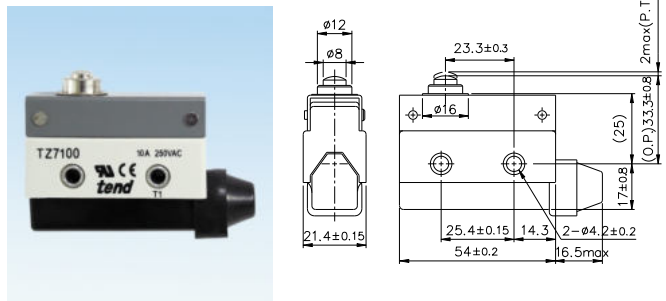
TZ-7110



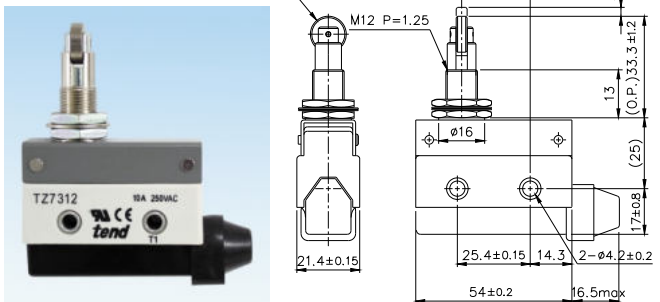
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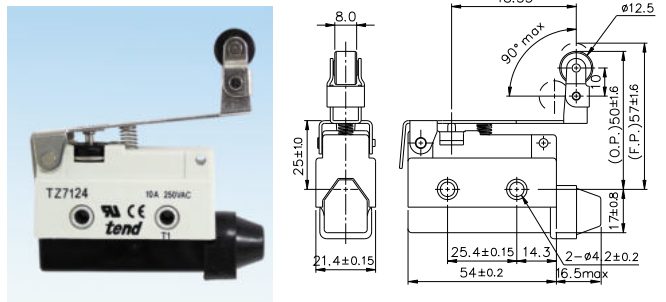
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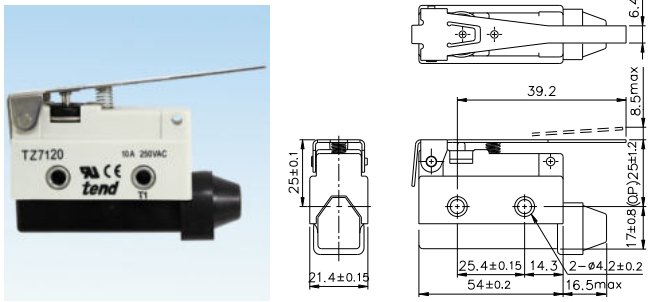
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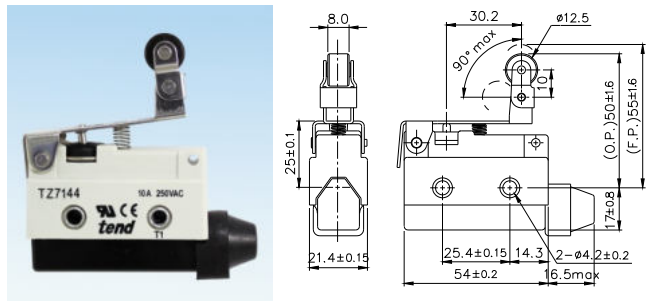
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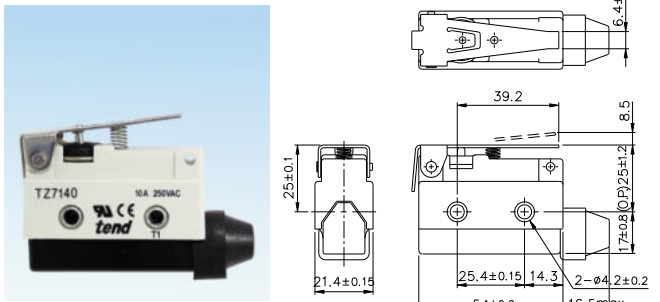
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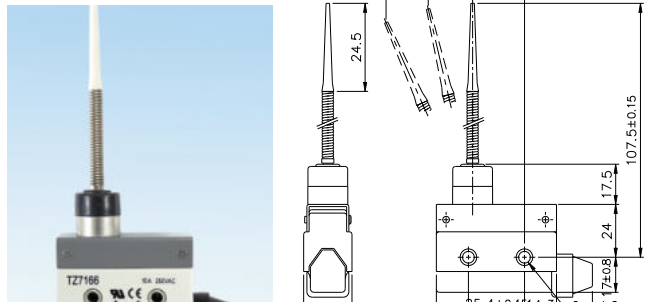
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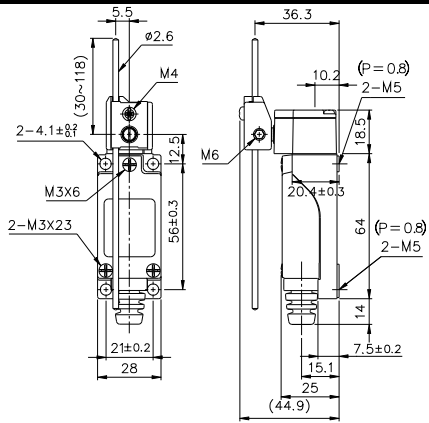
TZ-7140



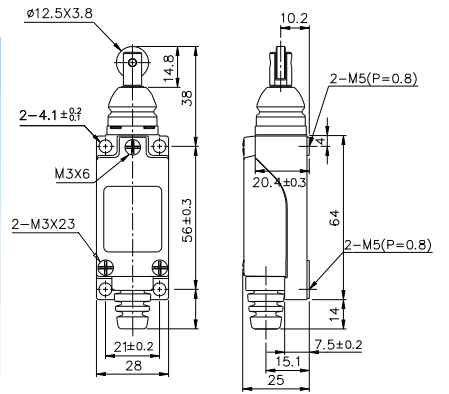
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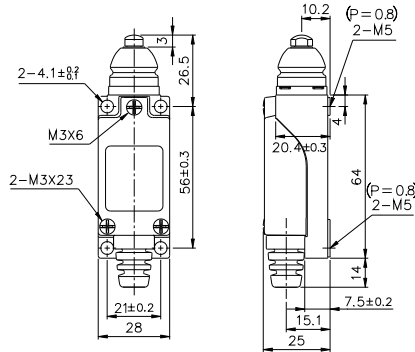
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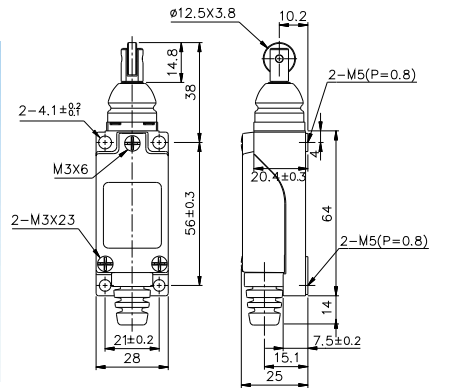
TZ-8112



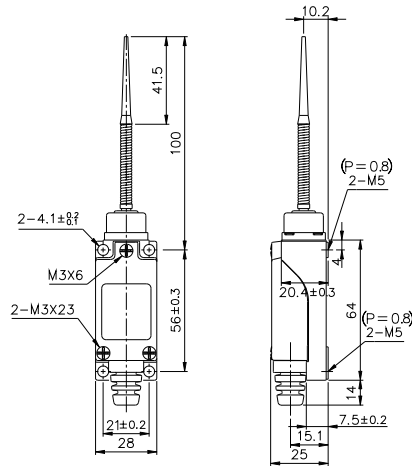
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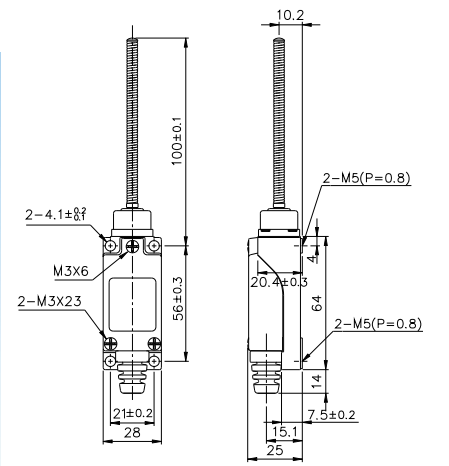
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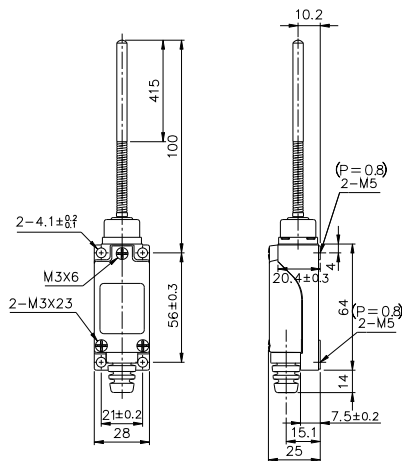
TZ-8166



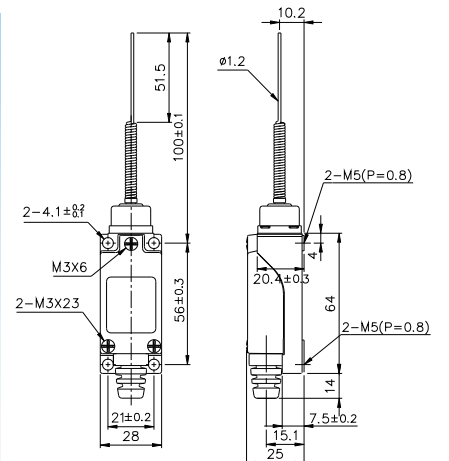
TZ-8167



TZ-8168

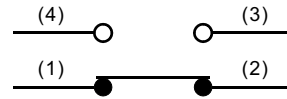


TZ-8169



tend LIMIT SWITCH

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

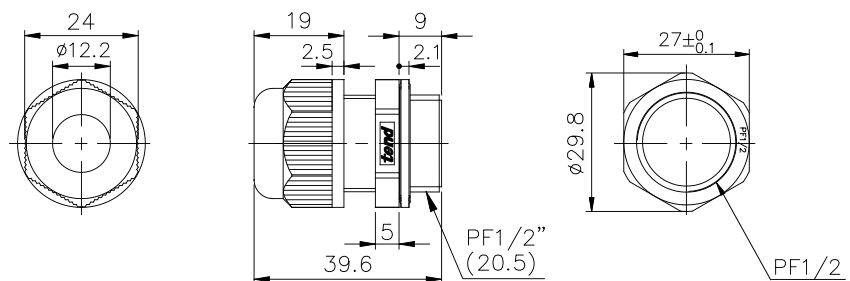


	NC	NO	NC	NO	NC	NO	NC	NO
250VAC	5	5	1	0.5	3	3	1.5	0.8
8 VDC	5	5	3	3	5	4	3	3
14 VDC	5	5	3	3	4	4	3	3
30 VDC	5	5	3	3	4	4	3	3
125 VDC	0.4	0.4						
250 VDC	0.2	0.2						
N.C.:24A max. N.O.:12Amax								

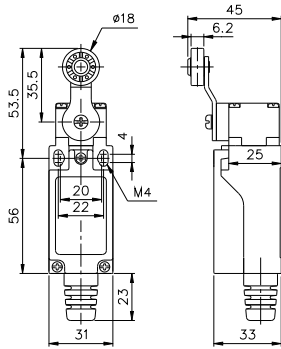
	0.5mm to 50cm/s
	Operating: -5 to +65°C
	95%RH max.
	IEC

PT	18°~28°	18°~28°	18°~28°	2mm	2mm	4mm	30mm
MD	14°	14°	14°	0.8mm			
OP	—	—	—				

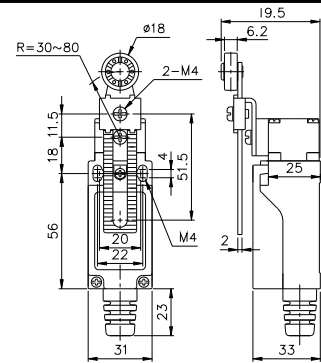
TZ-92 SERIES CABLE GLAND Diameter of cables: Ø6~12mm HPF12



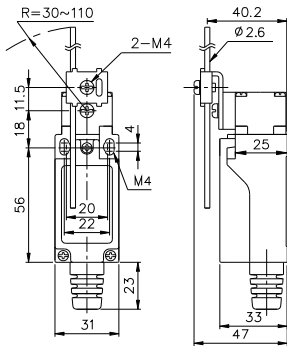
TZ-9104



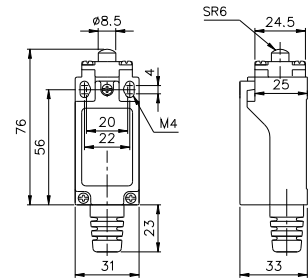
TZ-9108



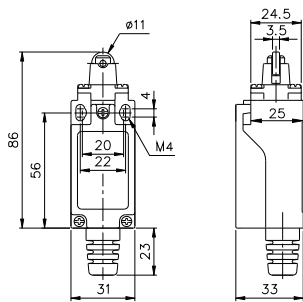
TZ-9107



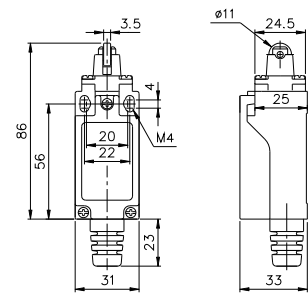
TZ-9111



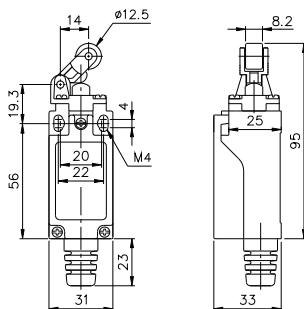
TZ-9112



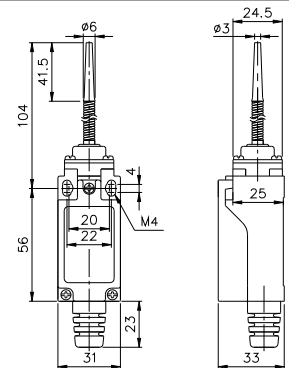
TZ-9122



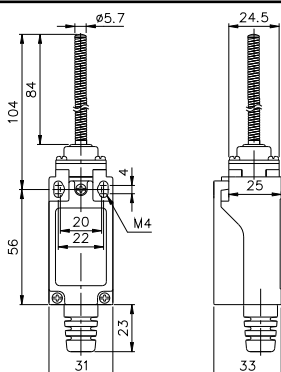
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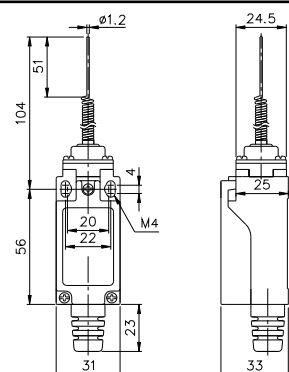
TZ-9166



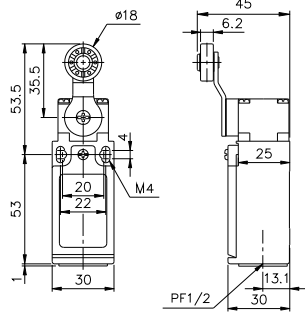
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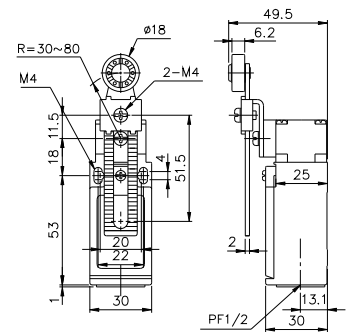
TZ-9169



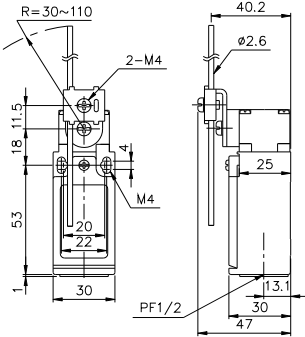
TZ-9204



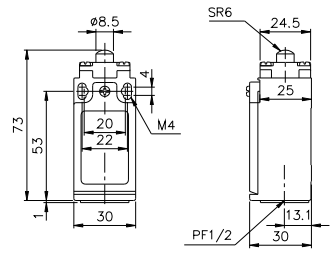
TZ-9208



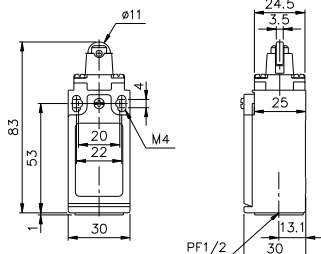
TZ-9207



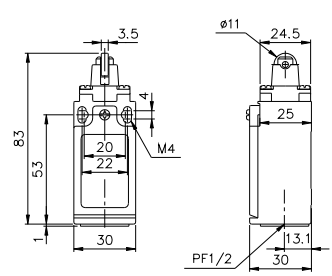
TZ-9211



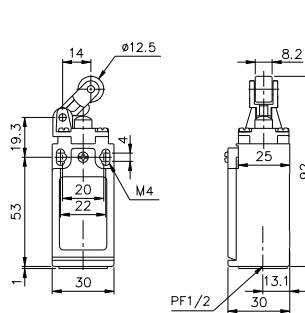
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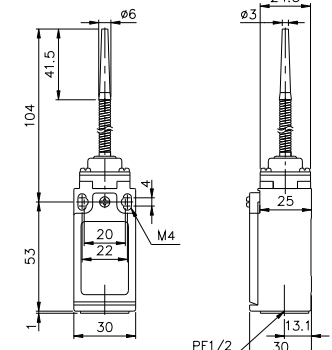
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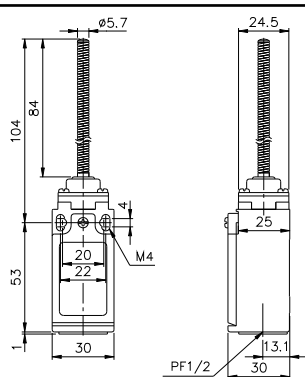
TZ-9224



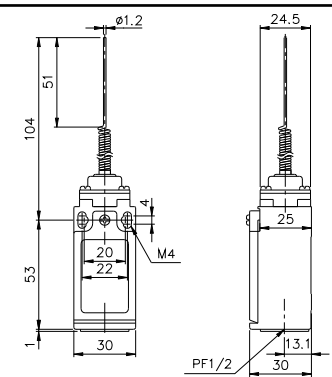
TZ-9266



TZ-9267

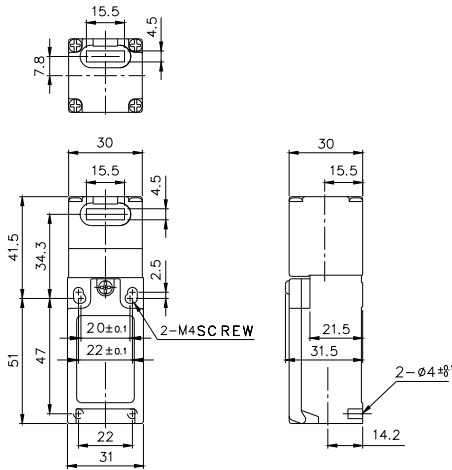


TZ-9269



DIMENSIONS

TZ-93BPG
TZ-93BPT
TZ-93CPG
TZ-93CPT

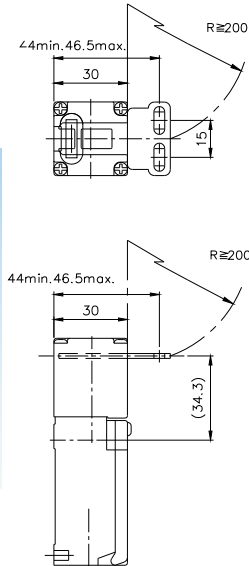


OPERATING CHARACTERISTICS

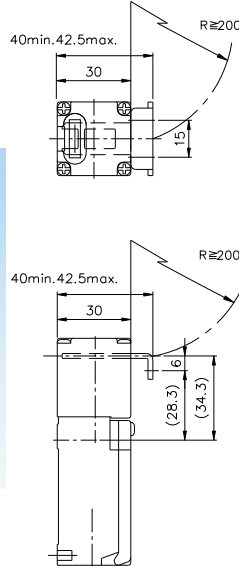
Key plug in force	max.	14.71N(1,500gf)
Key pull out force	max.	29.42N(3,000gf)
Pre travel		6±3mm
Total travel		(28mm)
Force required to have positive	min.	58.84N(6,000gf)
Positive opening travel	min.	10mm

DIMENSIONS OF OPERATING

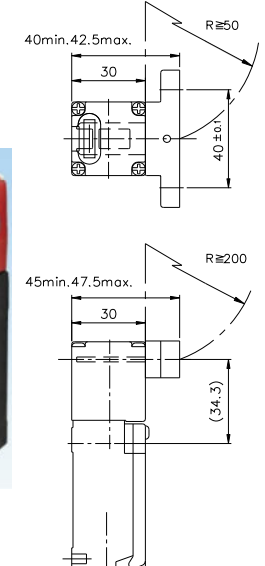
TZ-93BPG01
TZ-93BPT01
TZ-93CPG01
TZ-93CPT01



TZ-93BPG02
TZ-93BPT02
TZ-93CPG02
TZ-93CPT02

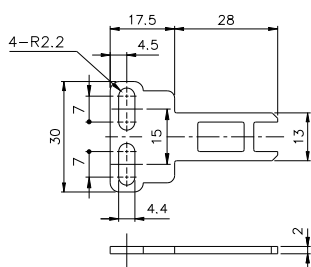


TZ-93BPG03
TZ-93BPT03
TZ-93CPG03
TZ-93CPT03

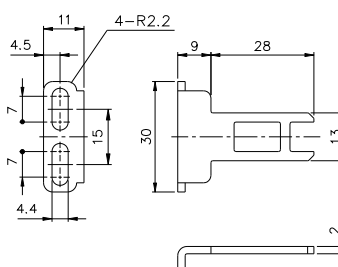


TYPE OF KEYS AND DIMENSIONS

TZ93-K1



TZ93-K2



TZ93-K3

