

# DATA SHEET

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Концевой выключатель, выключатель, путевой, Series серии TZ5, TZ6, TZ7, TZ8  
выключатели путевые, концевые, концевики.  
справочник,  
каталог,  
модули,  
datasheet,  
описание,  
фото,  
характеристики,  
параметры,  
габариты,  
размер,  
чертеж,  
путевой,  
концевой,  
концевик



# TEND LIMIT SWITCH

# DATA SHEET



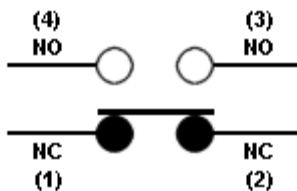
## LIMIT SWITCH TZ-5

### General Data

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



### CONTACT CONFIGURATION



### Specifications

#### Ratings

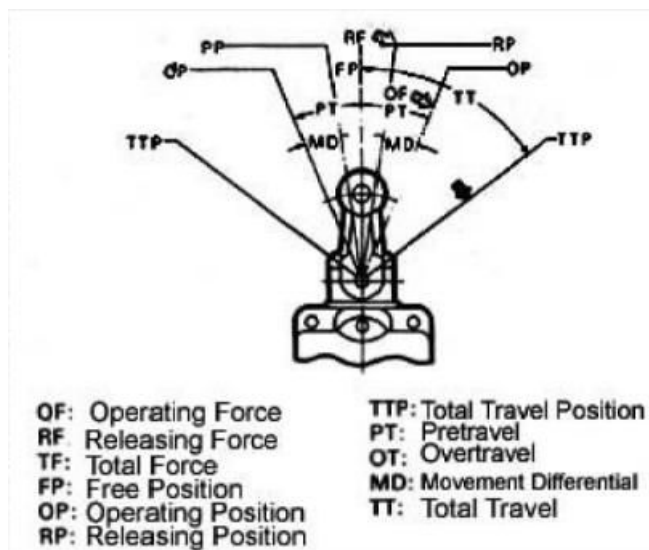
Rated voltage (V)	Noninductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC								
250 VAC	10	3	1.5	10	5	2.0		
480 VAC	5	2	1	5	3	1.0		
600 VAC	3	1.5	0.8	3	1.5	0.8		
8 VDC								
14 VDC	1	1	0.5	1.5	1	0.5		
30 VDC	10	6	3	10	6			
125 VDC	10	6	3	10	6			
250 VDC	6	4	3	6	4			
	0.8	0.2	0.2	0.8	0.2			
	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.							

#### Characteristics

Operating speed	1mm to 2m/sec(with type WLCA2)
Operating frequency	Mechanically: 120 operations/min. Electrically: 30 operations/min.
Contact resistance	15m OHM min. (initial)
Insulation resistance	100M OHM max. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals 2,000 VAC, 50/60Hz for 1 minute between current-carrying part and ground
Vibration	Mechanical durability: 10 to 55Hz 1.5mm double amplitude
Shock	Mechanical durability: Approx. 1,000m/sec <sup>2</sup> (approx. 100G's) Malfunction durability: Approx. 300m/sec <sup>2</sup> (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

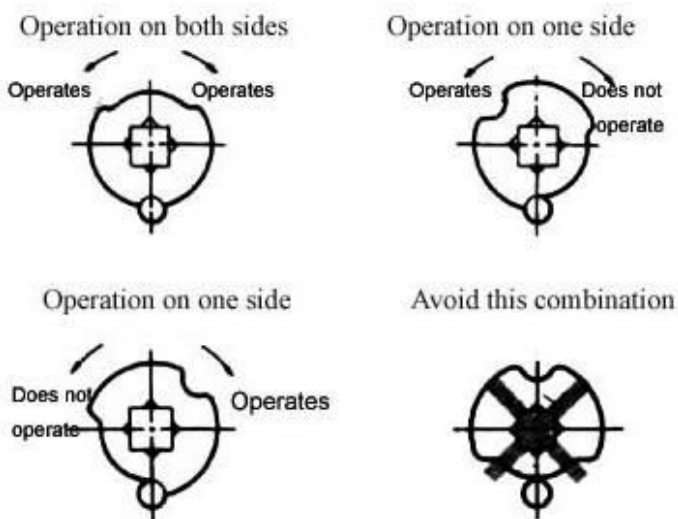
Type	TZ 5101	TZ 5102	TZ 5104	TZ 5105	TZ 5106	TZ 5107	TZ 5108	TZ 5169	TZ 5104-2
OF max.	2,720	2,720	1,360	1,200	150	124	1,360	29	900
RF min.	910	910	227	-	-	28	227	-	50
PT max.	1.7	1.7	20	55	28	20	20	28	30
OT min.	6.4	5.6	30	35	-	30	30	-	60
MD max.	1	1	12	-	-	12	12	-	16
OP	34 ± 0.8	-	-	90 ± 10	-	-	-	-	-

Type	TZ 5107-2	TZ 5108-2	TZ 5104-2N	TZ 5107-2N	TZ 5108-2N
OF max.	245	900	980	270	980
RF min.	14	50	120	30	120
PT max.	30	30	20	20	20
OT min.	60	60	70	70	70
MD max.	16	16	10	10	10
OP	-	-	-	-	-



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 switch



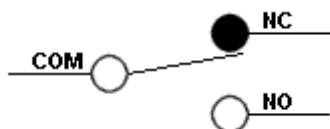
# ENCLOSED SWITCH TZ-6

## General Data

- Models TZ-6 incorporate Model TM Micro Switches with rugged diecast cases
- Available with various types of built-in switches (including split contact type, maintained operation type, magnetic blowout type) and various actuators



## CONTACT CONFIGURATION



## Specifications

### Ratings

Rated voltage (V)	Noninductive 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	15	3	1.5	1.25	15	5	2.5	30 Max.	15 Max.						
250 VAC											2.5	1.25	15	3	1.5
500 VAC											1.5	0.75	2.5	1.5	0.75
8 VDC	15	3	1.5	1.5	15	5	2.5	30 Max.	15 Max.						
14 VDC											3	1.5	10	5	2.5
30 VDC											6	3	1.5	5	5
125 VDC	0.4	0.4	0.4	0.05	0.05	0.05									
250 VDC	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 7msec (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.														

### Characteristics

Operating speed	0.01mm to 1m/sec
Operating frequency	Mechanically: 240 operations/min. Electrically: 20 operations/min.
Contact resistance	15m OHM min. (initial)
Insulation resistance	100M OHM max. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals 2,000 VAC, 50/60Hz for 1 minute between current-carrying part and ground
Vibration	Mechanical durability: 10 to 55Hz 1.5mm double amplitude
Shock	Mechanical durability: Approx. 1,000m/sec <sup>2</sup> (approx. 100G's) Malfunction durability: Approx. 300m/sec <sup>2</sup> (approx. 30G's)
Ambient operating temperature	General purpose type: -25° to +80°C Sealed type: -15° to +80°C
Humidity	General purpose type: 85% RH max. Sealed type: 95% RH max.
Service life	Mechanically: 20,000,000 operations min. Electrically: 500,000 operations min.
Weight	Approx. 32 to 65g

Type	TZ 6001	TZ 6002	TZ 6003	TZ 6004	TZ 6043	TZ 6101	TZ 6102	TZ 6103	TZ 6104	TZ 6143
OF max.	250 ~ 350	250 ~ 350	250 ~ 350	570	570	800	500	500	640	640
RF min.	114	114	114	170	170	240	100	100	230	230
PT max.	0.4	0.5	0.5	4	4	2	1	1	5	5
OT min.	5.5	3.6	3.6	6	6	5	3.5	3.5	6	6
MD max.	0.05	0.05	0.05	0.4	0.4	0.1	0.12	0.12	0.4	0.4
OP	38.2 ± 0.8	49.7 ± 1	49.7 ± 1	-	-	45.8 ± 0.8	49.7 ± 0.8	49.7 ± 0.8	-	-

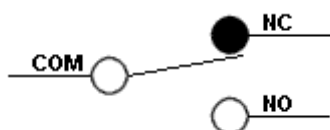
# LIMIT SWITCH TZ-7

## General Data

- High precision and long life (10,000,000 mechanical operations)
- Sealed with gasket diaphragm to provide high sealing property without use of any adhesive or pin



## CONTACT CONFIGURATION



## Specifications

### Ratings

Rated voltage (V)	Noninductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	10		3	1.5	10	10	5	2.5
250 VAC	10		2.5	1.25	10	10	3	1.5
480 VAC	3		1.5	.75	2.5	2.5	1.5	.75
8 VDC	10		3	1.5	6	6	6	5
14 VDC	10		3	1.5	6	6	6	5
30 VDC	8		3	1.5	6	6	5	2.5
125 VDC	0.5		0.4	0.4	0.4	0.4	0.05	0.05
250 VDC	0.25		0.2	0.2	0.2	0.2	0.03	0.03

Notes

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

### Characteristics

Operating speed	.01mm to 50cm/sec
Operating frequency	120 operations/min.
Contact resistance	25m OHM (initial)
Insulation resistance	100M OHM min. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals 2,000 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	Mechanical durability 1000m/sec <sup>2</sup> (approx 100G's)
Ambient temperature	-5° to +65°C
Humidity	95% RH max.
Service life	Mechanically: 10,000,000 operations min. Electrically: 500,000 operations min.
Weight	Approx. 60g
Degree of Protection	IEC 529 class IP65

Type	TZ 7100	TZ 7110	TZ 7120	TZ 7121	TZ 7124	TZ 7140	TZ 7141	TZ 7144	TZ 7166	TZ 7310	TZ 7311	TZ 7312
OF max.	600	600	150	180	200	220	240	280	120	600	600	600
RF min.	100	100	40	50	60	60	80	100	-	100	100	100
PT max.	2.0	2.0	13.5	11.0	11	8.5	6.5	6.5	25	2.0	2.0	2.0
OT min.	0.8	5.0	4.0	3.0	3.0	2.5	2.0	2.0	11	6.0	6.0	6.0
MD max.	0.8	0.8	3.2	2.4	2.4	2.0	1.5	1.5	-	0.8	0.8	0.8
OP	-	-	25 ± 1	40 ± 1	50 ± 1.2	25 ± 1	40 ± 1	50 ± 1.2	-	21.8 ± 1.2	33.3 ± 1.2	33.3 ± 1.2

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 Концевой выключатель, выключатель, путевого, Series серии TZ5, TZ6, TZ7, TZ8  
 выключатели путевого, концевые, концевики.  
 спусковой, катод, модули, datasheet, описание, фото, характеристики, параметры, размеры, чертеж, концевой, концевик

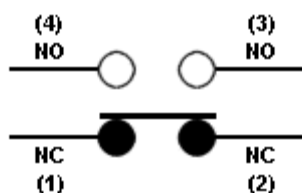
# LIMIT SWITCH TZ8

## General Data

- 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



## CONTACT CONFIGURATION



## Specifications

### Ratings

Rated voltage (V)	Noninductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	5		1.5	0.7	3	3	2	1
250 VAC	5		1	0.5	3	3	1.5	0.8
8 VDC	5		3	3	5	4	3	3
14 VDC	5		3	3	4	4	3	3
30 VDC	5		3	3	4	4	3	3
125 VDC	0.4							
250 VDC	0.2							

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

### Characteristics

Operating speed	5mm to 50cm/sec
Operating frequency	120 operations/min.
Contact resistance	25m OHM (initial)
Insulation resistance	100M OHM min. (at 500 VDC)
Dielectric strength	1,000 VAC, 50/60Hz for 1 minute between non-continuous terminals 2,000 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/sec <sup>2</sup> (approx. 30G's)
Ambient temperature	-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

Type	TZ 8104	TZ 8107	TZ 8108	TZ 8111	TZ 8112	TZ 8122	TZ 8166	TZ 8167	TZ 8168	TZ 8169
OF max.	750	750	750	900	900	900	150	150	150	150
RF min.	100	100	100	150	150	150	-	-	-	-
PT max.	20	20	20	1.5	1.5	1.5	30	30	30	30
OT min.	50	50	50	4	4	4	-	-	-	-
MD max.	12	12	12	1	1	1	-	-	-	-
OP	-	-	-	26 ± 0.8	37 ± 0.8	37 ± 0.8	-	-	-	-