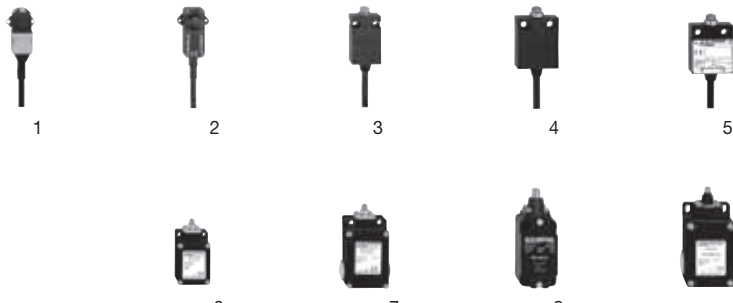


Selection tables: position switches and limit switches

Contact combinations

Enclosures - models			Default contacts		Image	Page
			Ordering suffix			
			Contact NO			
			Contact NC			
Light limit switches	M 660/6600	1	1-34			
	M 6610/6620	2	1-38			
	EM 14	3	1-42			
	ES 14	3	1-42			
	ES13	4	1-52			
	E 12	5	1-63			
	ES 51	6	1-74			
	ES/EM 41/411	7	1-86			
	M 330	8	1-100			
	ES/EM 61	9	1-107			
Medium heavy limit switches	T/M 015	10	1-114			
	T 016	11	1-114			
	T/M 017	12	1-114			
	U 431	13	1-120			
	U 432	14	1-121			
	U 433	15	1-121			
	U 434	16	1-121			
	T 422	17	1-124			
	T/M 441	18	1-124			
	T 452	19	1-124			
	T/M 461	20	1-125			
Heavy limit switches	T 470	21	1-125			
	T/M 035	22	1-130			
	T/M 250	23	1-131			
	TS 064	24	1-132			
	MS 064	24	1-133			
	T. 064	25	1-135			
	M. 064 L	25	1-137			
	M. 064 R	25	1-136			
	T. 067	26	1-138			
	M. 471 R	27	1-141			
			T 130	28	1-142	
			T 136	29	1-144	
			T 240	30	1-143	

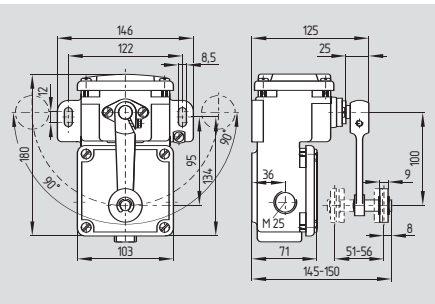
M= snap action
T = slow action
¹⁾ = by default 1-pole change-over contact
* = all contact combinations possible
(apart from only NC contact or only NO contact)

Contact configuration right/left	Image	Page	2 contacts		3 contacts			
Ordering suffix			10/10	01/01	10/11	11/01	10/02	20/01
Contact NO			2		2	1	1	2
Contact C N				2	1	2	2	1
T 250	23	1-131	T	T	T	T	T	T
T. 064	24	1-135						
T. 067	26	1-138	T	T				
T. 471	27	1-139						
M. 471	27	1-140						
T 246	30	1-145						

1000

Position and limit switches

T/M 250



- Metal enclosure
- Slow action $\ominus$, change-over, 2 NC with double break or 4 NC
- Snap action, change-over contact with double break
- Switching mechanism can be set for switching to right, left or in both directions
- Blow-out magnets available to switch high DC currents
- 2 cable entries
- Protection class IP 67
- Actuating speed max. 3 m/s with an actuating angle of 30°
Snap action: Min. 0.05 m/s
Slow action: Min. 0.005 m/s

Approvals



Ordering details

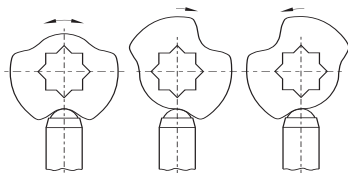
①D 250-②z③-④-⑤

No.	Replace	Description
①	T	Slow action $\ominus$
	M	Snap action
②	11	1 NO/1 NC
	02	2 NC
	02/02	4 NC (2 right/2 left)
③	ü	Slow action with overlapping contacts
④	c	Magnetic blow-out
	r	Position latching 2 x 45°
⑤	k	Tropical version with ceramic insulation
	t	Tropical and temperature-resistant version
		- 40 °C ... + 200 °C
	1276-2	Gold-plated contacts

Technical data

Standards:	IEC/EN 60947-5-1
Enclosure:	cast iron, galvanised, paint finish
Protection class:	IP 67 to EN 60529
Contact material:	silver
Switching system:	slow and snap action, double break
Contact type:	slow action: change-over contact, up to 250 V, with 2 galvanically separated contact bridges snap action: change-over contact, up to 250 V, with 2 galvanically separated contact bridges, positive break NC contacts $\ominus$
Termination:	screw terminals M 3.5
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
U_{imp} :	6 kV
U_i :	500 V
I_{the} :	16 A
I_e/U_e :	4 A / 400 VAC
Utilisation category:	AC-15
Max. fuse rating:	16 A gG D-fuse
Contact opening:	snap action: max. 2 x 2.5 mm slow action: max. 2 x 2 mm
Switchover time:	snap action: ≤ 5 ms
Bounce duration:	snap action: ≤ 5 ms
Ambient temperature:	- 30 °C ... + 90 °C
Mechanical life:	snap action: 10 million operations slow action: 5 million operations
Contact life:	10 million operations at 1 A / 400 V, $\cos \varphi = 0,4$
Switching frequency:	max. 3000/h
Actuating speed:	max. 3 m/s at 30° snap action: 2-pole: min. 0.05 m/s, 1-pole: min. 0.005 m/s slow action: min. 0.005 m/s

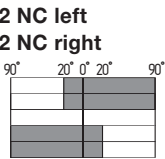
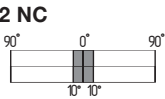
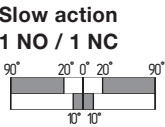
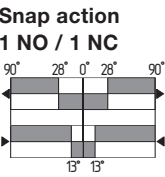
Note



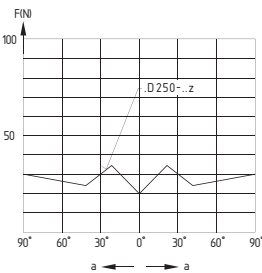
Switching mechanism can be set
for switching to right, left or in both directions

Position latching
Available with 2 x 45° position latching, suffix -r
Also possible with position latching: 2 x 30°, 2 x 60°, 2 x 90°, 1 x 45°, 1 x 60° and 1 x 90°

Contact variants



Force-travel diagram



Legend
F: actuating force
a: actuating travel

It is not possible to combine version with magnetic blow-out (Ordering suffix c) and temperature-resistant and tropical version (Ordering suffix t)