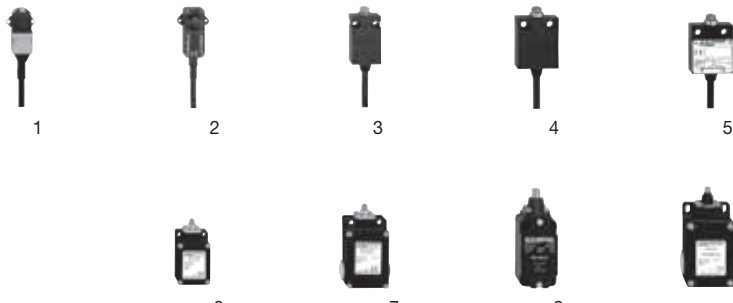


Selection tables: position switches and limit switches

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)

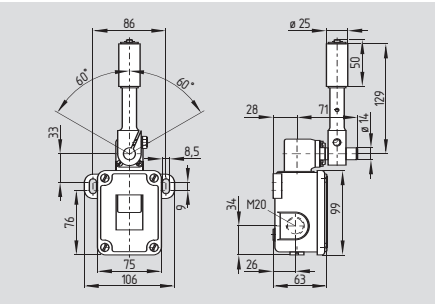
Contact configuration right/left	Image	Page	2 contacts		3 contacts			
Ordering suffix			10/10	01/01	10/11	11/01	10/02	20/01
Contact NO			2		2	1	1	2
Contact C N				2	1	2	2	1
T 250	23	1-131	T	T	T	T	T	T
T. 064	24	1-135						
T. 067	26	1-138	T	T				
T. 471	27	1-139						
M. 471	27	1-140						
T 246	30	1-145						

	1 contact		2 contacts			3 contacts				4 contacts					6 – 10 contacts	
	10	01	11	20	02	21	12	30	03	22	31	13	40	04	33	55
	1		1	2		2	1	3		2	3	1	4		3	5
		1	1		2	1	2		3	2	1	3		4	3	5
			M													
			M													
			M ¹⁾													
			T													
			T													
			M ¹⁾													
			T													
			T/M		T											
			M													
			T/M													
			T/M	T	T											
						T	T	T	T							
										T/M	T	T				
	T	T														
			T	T	T											
						T	T	T	T							
										T	T	T	T	T		
	T	T														
			T/M													
				T	T	T	T									
								T	T	T/M	T	T			T*	
			T/M	T	T											
			T/M	T	T	T	T	T	T	T/M	T	T				
						T	T	T	T	T	T	T	T	T		
						M	M	M	M	M	M	M	M	M		
						T	T	T	T							
						M	M	M		M	M		M			
						M	M		M	M		M		M		
			T	T	T											
						M	M			M						
															T*	
								T	T							
																T*

				4 contacts									6 contacts			
10/20	10/20	02/01	01/02	11/11	11/20	11/02	11/11	21/10	30/10	01/03	20/20	02/02	21/21	12/12	30/30	03/03
3	3			2	3	1	2	3	4		4		4	2	6	
		3	3	2	1	3	2	1		4		4	2	4		6
				T	T	T	T	T	T	T						
T	T	T	T													
											T	T	T	T	T	T
											M	M	M	M		M
															T	T

Belt alignment switches

T/M 441

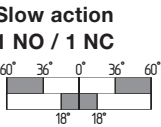
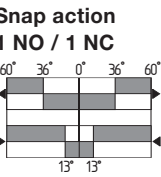


- Metal enclosure
- Slow action, change-over contact with double break
- Snap action, change-over contact with double break
- 2 cable entries
- Lever available with various lengths of roller
- Protection class IP 65
- Suitable for heavy duty

Technical data

Standards:	IEC/EN 60947-5-1
Enclosure:	cast iron, galvanised, paint finish
Protection class:	IP 65 to EN 60529
Contact material:	silver
Switching system:	slow and snap action, double break
Contact type:	snap action: change-over contact, slow action: positive break NC contact ⊖ double break with 2 separate contact bridges
Termination:	screw terminals M 4
Cable section:	max. 2.5 mm ² (incl. conductor ferrules)
U _{imp} :	snap action: 4 kV slow action: 6 kV
U _i :	snap action: 250 V slow action: 400 V suffix -k or -t: 500 V
I _{the} :	16 A
I _e /U _e :	snap action: 4 A / 230 V slow action: 4 A / 400 V
Utilisation category:	AC-15
Max. fuse rating:	16 A gL/gG D-fuse
Contact opening:	snap action: max. 2 x 2.5 mm slow action: max. 2 x 6.0 mm
Switchover time:	snap action: ≤ 35 ms
Bounce duration:	snap action: ≤ 5 ms
Ambient temperature:	- 30 °C ... + 90 °C
Mechanical life:	10 million operations
Switching frequency:	max. 3000/h
Repeat accuracy of switching points:	-

Contact variants



Approvals



Ordering details

① 441-11y-②-③-④

No.	Replace	Description
①	M. T.	Snap action Slow action
②	For the appropriate actuator: see page 1-157	
③	ü	Slow action with overlapping contacts
④	k	Tropical version with ceramic insulation
	t	Tropical and temperature- resistant version - 40 °C ... + 200 °C
	1276	Gold-plated contacts