Rotary switches T and switch-disconnectors P for safe and reliable switching, disconnection, control and operation

ATEX

xCommand

The high-performance, robust and compact rotary switches T and switch-disconnectors P are used in industry, trade and building engineering applications. The IP65 degree of protection with the top mounting switches and the switch front enable use in harsh environments. Ten switch basic types and four different construction types, in a whole range of standard switches and across a wide performance range, are available. Customized circuits can also be implemented in addition to the standard configurations. The possibilities are almost unlimited. A comprehensive accessory range complements the switch range and round off the range of applications. The rotary switches T and the switch-disconnectors P are approved conform to the ATEX directive 94/9 EC for EX zone 22. The approval enables use in dust explosion hazardous areas.

Main switch with Emergency-Stop function

Process and processing machines require a power disconnecting device conform to EN 60204-1. Furthermore, standstill in an emergency must also be assured. As shown in the above textile processing machine, both of these functions are assumed by a switch-disconnector P3. Standstill in an emergency requires:

- priority function and operation in all operating modes
- the power supply, which is connected to the machine states which produce the danger, must switch off as quickly as possible.

Maintenance and manual override switches

A whole range of electric motors are required to operate the conveyor belts in conveyor systems. In conditioning plants, warehouses, airports etc., the individual conveyor belts are combined to a unit. The safety and availability of these systems demands that each individual drive can be isolated from the power supply. The isolation is performed using a T and P manual override switch. The switch can be secured against reapplication of power using three padlocks in the off state. Maintenance and repair work can be completed in safety.

Mini rotary switch TM

The mini rotary switch stands out particularly due to its small size and simple handling and mounting features. There are many construction types available for selection. The rating of the TM to AC23A is 3 kW at 400/415 V, 50-60 Hz. The rated uninterrupted current I_u is 10 A. The mini rotary switch TM is mainly used as an On-Off switch; changeover contact, step switch, control switch, coding switch and control circuit isolator. Customized circuits can be used.

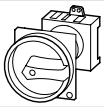
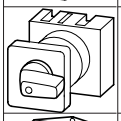
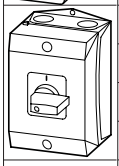
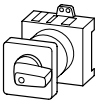
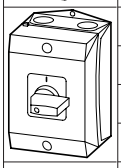
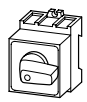
Rotary switch T

The rotary switch T represents a very flexible, compact and robust modular system. The T0, T3, T5B, T5, T6, T8 rating sizes are available in four different construction types. The rating of the T switch ranges from 6.5 kW to 132 kW with AC23A at 400/415 V, 50-60 Hz. The rated uninterrupted current I_u is between 20 A and 315 A.
The rotary switch T has a widely varied range of application uses. Customized versions are available.

Switch-disconnector P

The switch-disconnectors P1 up to 32 A, P3 up to 100 A, P5 up to 315 A are compact and robust. The manual operator acts directly on the contacts. The contacts are positively opened on de-energization. In addition to their use as switch disconnectors with and without the Emergency-Stop function, switch-disconnectors P can be used as On-Off switches as well as maintenance, manual override or safety switches.

Switching and control in practice

Construction type				Construction type group																
Appea-rance	Construction type	Construction type description	Degree of pro-tection	A1	A2	A4	A5	C	D	F	G	H1	H2	I2	K4	K5	L4	L5	N	O
	**E/SVB**	**Flush mount control circuit isolater** [1]	IP65 front																	
	EA/SVB	**Flush mounting main switch,** for use as an Emergency-Stop device [2]	IP65 front	●	●	●	●	●	●											
	EA-SVB-SW	**Flush mounting main switch,** without Emergnecy-Stop function [3]	IP65 front	●	●	●	●	●	●											
	**I1/SVB**	**Surface mounting main switch,** for use as an Emergency-Stop device [2]	IP65	●																
	I2/SVB				●															
	I4/SVB					●														
	I5/SVB						●													
	I45/SVB									●										
	I48/SVB										●									
	**I1/SVB-SW**	**Surface mounting main switch,** without Emergency-Stop function [3]	IP65	●																
	I2/SVB-SW				●															
	I4/SVB-SW					●														
	I5/SVB-SW						●													
	I45/SVB-SW									●										
	I48/SVB-SW										●									
	**V/SVB**	**Rear mounting main switch,** for use as an Emergency-Stop device [2]	IP65 front	●	●	●	●	●	●	●	●									
	V/SVB-SW	**Rear mounting main switch,** without Emergency-Stop function [3]	IP65 front	●	●	●	●	●	●	●	●									
	**E**	**Flush mounting,** with thumb-grip	IP65 front									●	●	●	●	●	●	●	●	●
	**EZ**	**Centre mounting,** with thumb-grip	IP65 front									●	●	●						●
	**I1**	**Surface mounting,** with thumb-grip	IP65									●								
	I2												●	●						
	I4														●		●			
	I5															●		●		
	**IVS**	**Service distribution board mounting,** with thumb-grip	IP30 front									●	●				●	●		●
	**Z**	**Rear mounting,** with thumb-grip	IP65 front									●	●	●	●	●	●	●	●	●
	**E-RT**	**Flush mounting on-off switch,** for use as an Emergency-Stop device [4]	IP65 front																	
	**I1-RT**	**Surface mounting on-off switch,** for use as an Emergency-Stop device [4]	IP65																	
	I2-RT																			
	I4-RT																			
	I5-RT																			
	**IVS-RT**	**Service distribution board mounting on-off switch,** for use as an Emergency-Stop device [4]	IP30 front																	

Notes:
[1] can be locked in the 0 position with padlocking feature
[2] according to IEC/EN 60204-1, VDE0113, part 1 with red rotary handle and yellow locking collar, can be locked in 0 position
[3] with black rotary handle and locking collar, can be locked in 0 position
[4] according to IEC/EN 60 204-1, VDE 0113 part 1, with red thumb-grip and yellow front label

	P	R	S1	S2	S4	S5	U2	U4	U5	V	W	X
										•		
	•	•									•	•
	•	•									•	•
		•										
												•
	•	•										
			•	•	•	•	•	•	•			
			•									
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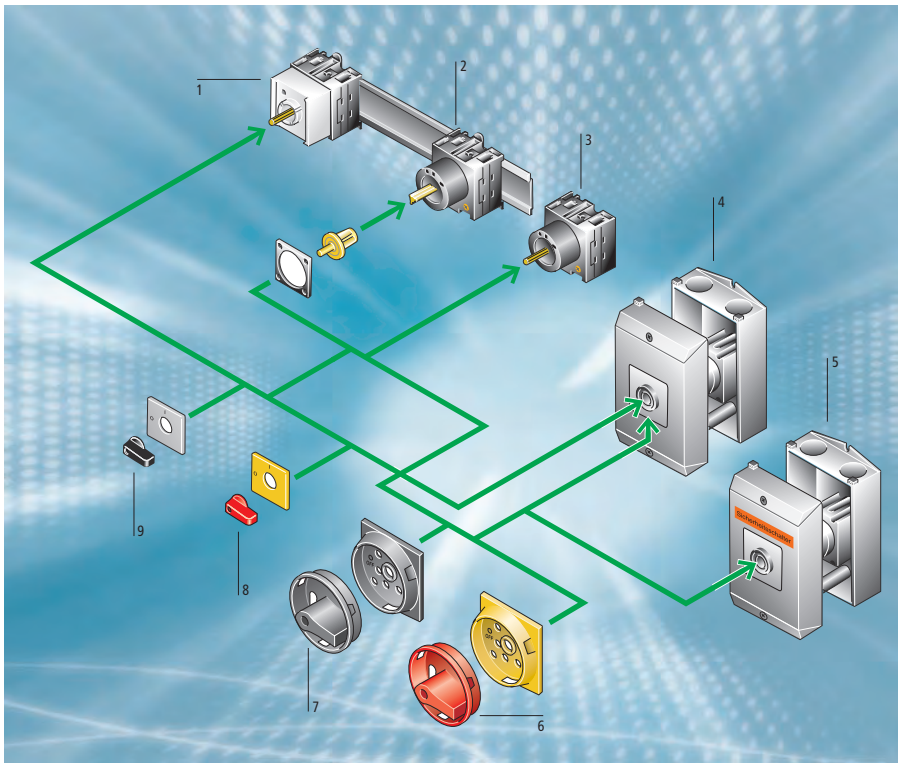
						•			•			
			•	•	•	•						

Systematic overview of the construction types



1) service distribution board mounting, .../IVS
2) rear mounting .../Z or .../V/SVB-...
3) flush mounting .../E or .../EA/SVB-... ; centre mounting .../EZ
4) surface mounting .../I.. or .../I../SVB-...
5) safety switch .../I..-SI/...
6) red rotary handle and yellow locking collar
7) black rotary handle and locking collar
8) red thumb-grip and yellow front label
9) black rotary handle and locking collar

From the requirement to the part-no.:
Requirement: 2-pole main switch for rear mounting
Rated continuous current: 16 A
Switch selection according to overview list: **T0-2-102/..** (construction type group A1)
Construction type from construction type list: **V/SVB**
Order part no: **T0-2-102/V/SVB**

Requirement: Step switch without 0 position, 1 pole, 4 steps
Mounting in enclosure, rated uninterrupted current: 12 A
Switch selection according to overview list: **T0-2-8231/..** (construction type group H1)
Construction type from construction type list: **I2**
Order part no: **T0-2-8231/I2**

Ordering of non-standard contact sequences
An order form with notes for non-standard contact sequences is provided in the electronic catalogue:
http://catalog.moeller.net/de

Technical support can be obtained from your Moeller sales offices.

Overview of the rotary switch up to 100 A and switch-disconnector up to 315 A

Basic switch type	**T0**	Construction type group	**T3**	Construction type group	**T5B**	Construction type group	**T5**	Construction type group	**P1-25**	Construction type group
Max. rating to AC-23A, 400/415V, 50-60 Hz	6.5 KW		13 KW		22 KW		30 KW		13 KW	
Max. rated uninterrupted current I_u	20 A		32 A		63 A		100 A [1]		25 A	
Main switch without auxiliary contacts										
1 pole	T0-1-8200/..	A1	T3-1-8200/..	A2	T5B-1-8200/..	A4	T5-1-8200/..	A5	–	
2 pole	T0-1-102/..	A1	T3-1-102/..	A2	T5B-1-102/..	A4	T5-1-102/..	A5	–	
3 pole	T0-2-1/..	A1	–		–		–		P1-25/..	A2
3 pole + N	T0-2-8900/..	A1	–		–		–		P1-25/../ N	A2
6 pole	T0-3-8342/..	A1	T3-3-8342/..	A2	T5B-3-8342/..	A4	T5-3-8342/..	A5	–	
8 pole	T0-4-8344/..	A1	T3-4-8344/..	A2	T5B-4-8344/..	A4	T5-4-8344/..	A5	–	
Main switch without auxiliary contacts										
3 pole with auxiliary contact 1N/O / 0N/C	T0-2-15679/..	A1	–		–		–		–	
3 pole with auxiliary contact 1N/O / 1N/C	–		–		–		–		P1-25/.../ HI11	A2
6 pole with auxiliary contact 1N/O / 1N/C	T0-4-15682/..	A1	T3-4-15682/..	A2	T5B-4-15682/..	A4	T5-4-15682/..	A5	–	
3 pole with auxiliary contact 1N/O / 1N/C	T0-3-15683/..	A1	T3-3-15683/..	A2	–		–		–	
3 pole + N with auxiliary contact 1N/O / 1N/C	T0-3-15680/..	A1	T3-3-15680/..	A2	–		–		P1-25/.../ N/HI11	C
3 pole + N with overlapping auxiliary contact 1N/O / 1N/C	T0-3-8901/..	A1	T3-3-8901/..	A2	T5B-3-8901/..	A4	T5-3-8901/..	A5	–	
On-off switch without auxiliary contacts										
1 pole	T0-1-8200/..	H1	T3-1-8200/..	I2	T5B-1-8200/..	K4	T5-1-8200/..	K5	–	
2 pole	T0-1-102/..	H1	T3-1-102/..	I2	T5B-1-102/..	K4	T5-1-102/..	K5	–	
3 pole	T0-2-1/..	H1	–		–		–		P1-25/..	H2
3 pole + N	T0-2-8900/..	H1	–		–		–		P1-25/.../ N	H2
6 pole	T0-3-8342/..	H1	T3-3-8342/..	I2	T5B-3-8342/..	K4	T5-3-8342/..	K5	–	
8 pole	T0-4-8344/..	H1	T3-4-8344/..	I2	T5B-4-8344/..	K4	T5-4-8344/..	K5	–	
On-off switch with auxiliary contacts										
3 pole with auxiliary contact 1N/O / 0N/C	T0-2-15679/..	H1	–		–		–		–	
3 pole with auxiliary contact 1N/O / 1N/C	–		–		–		–		P1-25/.../ HI11	H2
6 pole with auxiliary contact 1N/O / 1N/C	T0-4-15682/..	H1	T3-4-15682/..	I2	T5B-4-15682/..	K4	T5-4-15682/..	K5	–	
3 pole with auxiliary contact 2N/O / 1N/C	T0-3-15683/..	H1	T3-3-15683/..	I2	–		–		–	
3 pole + N with overlapping										
Auxiliary contacts 1N/O / 1N/C	T0-3-8901/..	H1	T3-3-8901/..	I2	–		–		–	
On-off switch with Emergency-Stop function										
1 pole	T0-1-8200/..	S1	T3-1-8200/..	U2	T5B-1-8200/..	U4	T5-1-8200/..	U5	–	
2 pole	T0-1-102/..	S1	T3-1-102/..	U2	T5B-1-102/..	U4	T5-1-102/..	U5	–	
3 pole	T0-2-1/..	S1	–		–		–		P1-25/..	S2
3 pole + N	T0-2-8900/..	S1	–		–		–		–	

Notes: [1] 95A max at T5-4-8344/I5...

P1-32 15 KW 32 A	Construction type group	P3-63 37 KW 63 A	Construction type group	P3-100 50 KW 100 A	Construction type group	P5-125 45 KW 125 A	Construction type group	P5-160 55 KW 160 A	Construction type group	P5-250 90 KW 250 A	Construction type group	P5-315 110 KW 315 A	Construction type group
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
P1-32/..	A2	P3-63/..	A4	P3-100/..	A5	P5-125/..	C	P5-160/..	C	P5-250/..	C	P5-315/..	C
P1-32/../ N	A2	P3-63/../ N	A4	P3-100/../ N	A5	P5-125/../ N	C	P5-160/../ N	C	P5-250/../ N	C	P5-315/../ N	C
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		P5-125/.../ HI10	C	P5-160/.../ HI10	C	P5-250/.../ HI10	C	P5-315/.../ HI10	C
P1-32/.../ HI11	A2	P3-63/.../ HI11	A4	P3-100/.../ HI11	A5	–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
P1-32/.../ N/HI11	C	P3-63/.../ N/HI11	A4	P3-100/.../ N/HI11	A5	–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
P1-32/..	H2	P3-63/..	L4	P3-100/..	L5	P5-125/..	N	P5-160/..	N	P5-250/..	N	P5-315/..	N
P1-32/.../ N	H2	P3-63/.../ N	L4	P3-100/.../ N	L5	–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
P1-32/.../ HI11	H2	P3-63/.../ HI11	L4	P3-100/.../ HI11	L5	–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
–		–		–		–		–		–		–	
P1-32/..	S2	P3-63/..	S4	P3-100/..	S5	–		–		–		–	
–		–		–		–		–		–		–	

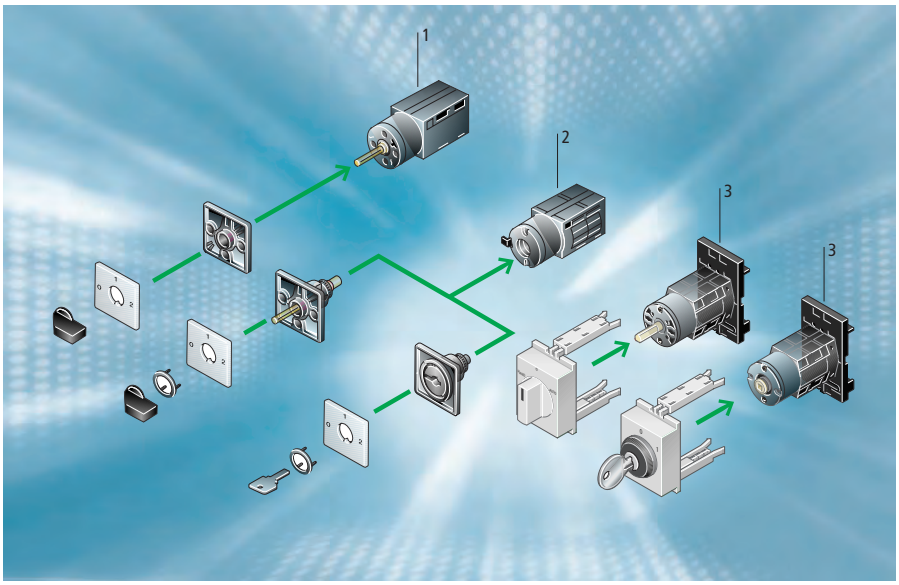
Overview of the rotary switch and switch-disconnector up to 100 A

Basic switch type	**TM**	**T0**	Construction type group	**T3**	Construction type group	**T5B**	Construction type group
Max. rating to AC-23A, 400/415V, 50-60 Hz	3.0 KW	6.5 KW		13 KW		22 KW	
Max. rated uninterrupted current I_u	10 A	20 A		32 A		63 A	
Safety switch in surface mounting enclosure, with red handle and yellow locking collar, IP65							
3 pole	–	–		–		–	
6 pole	–					T5B-3-8342/I4-SI	–[1]
3 pole + N	–	–		–		–	
3 pole with auxiliary contact 1N/O / 0N/C	–	–		–		–	
6 pole with auxiliary contact 1N/O / 1N/C	–	–		–		T5B-4-15682/I4-SI	–[1]
6 pole with auxiliary contact 2N/O / 0N/C	–	–		–		T5B-4-8903/I4-SI	–[1]
Safety switch in surface mounting enclosure, with black handle and locking collar, IP65							
3 pole	–	–		–		–	
6 pole	–					T5B-3-8342/I4-SI-SW	–[1]
3 pole + N	–	–		–		–	
3 pole with auxiliary contact 1N/O / 0N/C	–	–		–		–	
6 pole with auxiliary contact 1N/O / 1N/C	–	–		–		T5B-4-15682/I4-SI-SW	–[1]
6 pole with auxiliary contact 2N/O / 0N/C	–	–		–		T5B-4-8903/I4-SI-SW	–[1]
Changeover contact with 0 position							
1 pole 1-0-2	–	T0-1-8210/..	H1	T3-1-8210/..	I2	T5B-1-8210/..	K4
2 pole 1-0-2	–	T0-2-8211/..	H1	T3-2-8211/..	I2	T5B-2-8211/..	K4
3 pole 1-0-2	–	T0-3-8212/..	H1	T3-3-8212/..	I2	T5B-3-8212/..	K4
3 pole 1-0-2, with an auxiliary contact per switch position	–	–		–		–	
4 pole 1-0-2	–	T0-4-8213/..	H1	T3-4-8213/..	I2	T5B-4-8213/..	K4
4 pole (one early make pole) 1-0-2	–	T0-4-8294/..	H1	T3-4-8294/..	I2	T5B-4-8294/..	K4
4 pole (one early make pole) MAINS-0-EMERGENCY CURRENT	–	–		T3-4-8902/..	I2	T5B-4-8902/..	K4
Changeover contact without 0 position							
1 pole 1-2	–	T0-1-8220/..	H1	T3-1-8200/..	I2	T5B-1-8200/..	K4
2 pole 1-2	–	T0-2-8221/..	H1	T3-2-8221/..	I2	T5B-2-8221/..	K4
3 pole 1-2	–	T0-3-8222/..	H1	T3-3-8222/..	I2	T5B-3-8222/..	K4
4 pole 1-2	–	T0-4-8223/..	H1	T3-4-8223/..	I2	T5B-4-8223/..	K4
5 pole 1-2	–	T0-5-8369/..	O	T3-5-8369/..	I2	T5B-5-8369/..	W
6 pole 1-2	–	T0-6-8370/..	O	T3-6-8370/..	P	T5B-6-8370/..	W
8 pole 1-2	–	T0-8-8372/..	O	T3-8-8372/..	P	T5B-8-8372/..	W
Reversing switch							
2 pole 1-0-2	–	T0-2-8400/..	H1	T3-2-8400/..	I2	T5B-2-8400/..	K4
3 pole 1-0-2	–	T0-2-8401/..	H1	T3-2-8401/..	I2	T5B-2-8401/..	K4
Star-delta switch							
3 pole 0-Y-	–	T0-4-8410/..	H1	T3-4-8410/..	I2	T5B-4-8410/..	K4
Reversing-star-delta switch							
3 pole -Y-0-Y-	–	T0-5-15876/..	O	T3-5-15876/..	I2	T5B-5-15876/..	N
multispeed switch, 3 poles, 2 speeds,							
2 seperate windings 0-1-2	–	T0-3-8451/..	H1	T3-3-8451/..	I2	T5B-3-8451/..	K4
Pole changing 0-1-2	–	T0-4-8440/..	H1	T3-4-8440/..	I2	T5B-4-8440/..	K4
Pole changing 1-0-2	–	T0-4-8441/..	H1	T3-4-8441/..	I2	T5B-4-8441/..	K4
Reversing-pole changing, 3 poles, 2 speeds, 2 directions,							
Pole changing 2-1-0-1-2	–	T0-6-15866/..	O	T3-6-15866/..	P	T5B-6-15866/..	N
Surface mounting switch according to ATEX directive 94/9 EC							
For use in ex-zone 22	–	•[2]		•[2]		•[2]	
Customized special switch	•	•		•		•	

Notes:
[1] The listed switch designations without construction type designation (A-Z) are completed types
[2] The basic types are available for ATEX application in dependence on the number of units or the switch type
[3] 95 A max at T5-4-8344/I5...

	T5	Construction type group	P1-25	Construction type group	P1-32	Construction type group	P3-63	Construction type group	P3-100	Construction type group
	30 KW		13 KW		15 KW		37 KW		50 KW	
	100 A [3]		25 A		32 A		63 A		100 A	
	–		P1-25/I2-SI	–[1]	P1-32/I2-SI	–[1]	P3-63/I4-SI	–[1]	P3-100/I5-SI	–[1]
	T5-3-8342/I5-SI	–[1]								
	–		P1-25/I2-SI/N	–[1]	P1-32/I2-SI/N	–[1]	P3-63/I4-SI/N-	–[1]	P3-100/I5-SI/N	–[1]
	–		P1-25/I2-SI/HI11	–[1]	P1-32/I2-SI/HI11	–[1]	P3-63/I4-SI/HI11	–[1]	P3-100/I5-SI/HI11	–[1]
	T5-4-15682/I5-SI	–[1]	–		–		–		–	
	T5-4-8903/I5-SI	–[1]	–		–		–		–	
	–		P1-25/I2-SI-SW	–[1]	P1-32/I2-SI-SW	–[1]	P3-63/I4-SI-SW	–[1]	P3-100/I5-SI-SW	–[1]
	T5-3-8342/I5-SI-SW	–[1]								
	–		P1-25/I2-SI/N-SW	–[1]	P1-32/I2-SI/N-SW	–[1]	P3-63/I4-SI/N--SW	–[1]	P3-100/I5-SI/N-SW	–[1]
	–		P1-25/I2-SI/HI11-SW	–[1]	P1-32/I2-SI/HI11-SW	–[1]	P3-63/I4-SI/HI11-SW	–[1]	P3-100/I5-SI/HI11-SW	–[1]
	T5-4-15682/I5-SI-SW	–[1]	–		–		–		–	
	T5-4-8903/I5-SI-SW	–[1]	–		–		–		–	
	T5-1-8210/..	K5	–		–		–		–	
	T5-2-8211/..	K5	–		–		–		–	
	T5-3-8212/..	K5	–		–		–		–	
	–		–		–		–		–	
	T5-4-8213/..	K5	–		–		–		–	
	T5-4-8294/..	K5	–		–		–		–	
	T5-4-8902/..	K5	–		–		–		–	
	T5-1-8200/..	K5	–		–		–		–	
	T5-2-8221/..	K5	–		–		–		–	
	T5-3-8222/..	K5	–		–		–		–	
	T5-4-8223/..	K5	–		–		–		–	
	T5-5-8369/..	W	–		–		–		–	
	T5-6-8370/..	W	–		–		–		–	
	T5-8-8372/..	W	–		–		–		–	
	–		–		–		–		–	
	–		–		–		–		–	
	–		–		–		–		–	
	–		–		–		–		–	
	T5-3-8451/..	N	–		–		–		–	
	T5-4-8440/..	N	–		–		–		–	
	T5-4-8441/..	N	–		–		–		–	
	–		–		–		–		–	
	•[2]		•[2]		•[2]		•[2]		•[2]	
	•		–		–		–		–	

Switching and control in practice

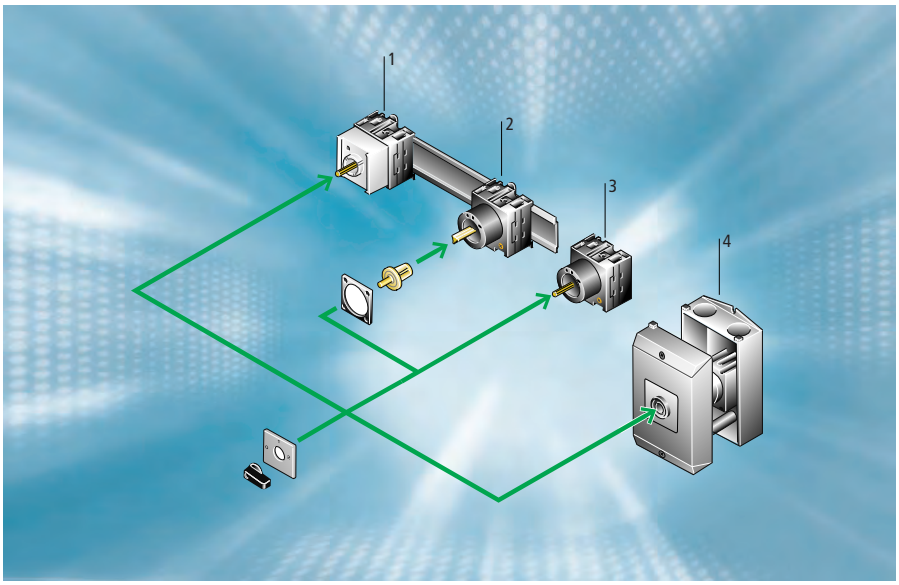


Control switch TM

1. flush mounting

2. centre mounting

3. service distribution board mounting



Control switch TO

1. service distribution board mounting

2. rear mounting

3. flush mounting/centre mounting

4. top mounting

Auxiliary current control switch

Rotary switches T and TM for auxiliary current circuits simplify command functions at central points. This saves time and introduces clarity to the production process. Coding switches, step switches, sequence and manual/automatic switches are frequent applications for the auxiliary current control switch. Particularly suitable are rotary switches T0 and mini rotary switches TM; they also feature space-saving installation. Rotary switches are suitable for switching electronic circuits conform to IEC/EN 61131-2, VDE 0411 part 500. The T0 can master a whole range of switching applications with up to 22 contacts and 12 switch positions. Rotary switches T0 with their large surfaces can also be operated when the operator is wearing gloves. The TM is ideal because of its small size and fits nicely with the command and signalling range RMQ. All contacts feature double breaking contacts.

Overview of rotary switches up to 20 A

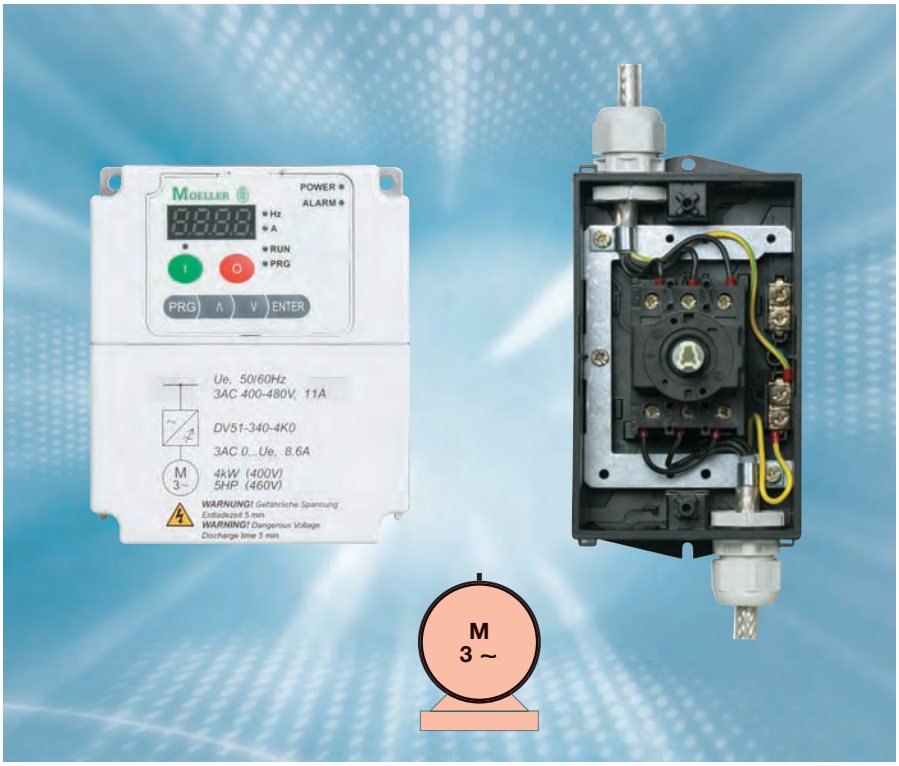
Basic switch type	TM	T0	Construction typ group
Max. rated uninterrupted current I_u	10 A	20 A	
Step switch with 0 position			
1 pole 2 step; 0-1-2	TM-1-8240/..		W
1 pole 3 step; 0-1-2-3	TM-2-8241/..		W
1 pole 4 step; 0-1-2-3-4	TM-2-8242/..		W
1 pole 5 step; 0-1-2-3-4-5	TM-3-8243/..		W
1 pole 6 step; 0-1-2-3-4-5-6	TM-3-8244/..		W
1 pole 6 step; 0-1- bis-9	TM-3-8247/..		W
2 pole 2 step; 0-1-2	TM-2-8260/..		W
2 pole 3 step; 0-1-2-3	TM-3-8261/..		W
2 pole 4 step; 0-1-2-4	TM-4-8262/..		W
3 pole 2 step; 0-1-2	TM-3-8280/..		W
3 pole 3 step; 0-1-2-3	TM-5-8281/..		W
3 pole 4 step; 0-1-2-3-4	TM-6-8282/..		W
1 pole 2 step; 0-1-2		T0-1-8240/..	H1
1 pole 3 step; 0-1-2-3		T0-2-8241/..	H1
1 pole 4 step; 0-1-2-3-4		T0-2-8242/..	H1
1 pole 5 step; 0-1-2-3-4-5		T0-3-8243/..	H1
1 pole 6 step; 0-1-2-3-4-5-6		T0-3-8244/..	H1
3 pole 2 step; 0-1-2		T0-3-8280/..	H1
3 pole 3 step; 0-1-2-3		T0-5-8281/..	O
3 pole 4 step; 0-1-2-3-4		T0-6-8282/..	O
Step switch without 0 position			
1 pole 3 step; 1-2-3	TM-2-8230/..		X
1 pole 4 step; 1-2-3-4	TM-2-8231/..		X
1 pole 5 step; 1-2-3-4-5	TM-3-8232/..		W
1 pole 6 step; 1-2-3-4-5-6	TM-3-8233/..		W
1 pole 10 step; 1-2-bis -10	TM-5-8237/..		W
2 pole 5 step; 1-2-3-4-5	TM-5-8252/..		W
2 pole 6 step; 1-2-3-4-5-6	TM-5-8253/..		W
3 pole 3 step; 1-2-3	TM-5-8270/..		W
3 pole 4 step; 1-2-3-4	TM-6-8271/..		W
1 pole 2 step; 1-2		T0-1-8220/..	H1
1 pole 3 step; 1-2-3		T0-2-8230/..	H1
1 pole 4 step; 1-2-3-4		T0-2-8231/..	H1
1 pole 5 step; 1-2-3-4-5		T0-3-8232/..	H1
1 pole 6 step; 1-2-3-4-5-6		T0-3-8233/..	H1
2 pole 4 step; 1-2-3-4		T0-2-8251/..	H1
3 pole 2 step; 1-2		T0-3-8222/..	H1
3 pole 3 step; 1-2-3		T0-5-8270/..	O
3 pole 4 step; 1-2-3-4		T0-6-8271/..	O

Basic switch type	TM	T0	Construction typ group
Max. rated uninterrupted current I_u	10 A	20 A	
On-off switch			
1 pole; 0-1	TM-1-8290/..		X
2 pole; 0-1	TM-1-8291/..		X
3 pole; 0-1	TM-2-8292/..		X
3 pole + N; 0-1	TM-2-8293/..		X
6 pole; 0-1	TM-3-8326/..		W
1 pole; 0-1		T0-1-15401/..	H1
2 pole; 0-1		T0-1-15402/..	H1
3 pole; 0-1		T0-2-15403/..	H1
3 pole + N; 0-1		T0-2-15404/..	H1
Selector switch with 0 position			
1 pole; 1-0-2	TM-1-8210/..		X
2 pole; 1-0-2	TM-2-8211/..		X
3 pole; 2-0-1	TM-3-8212/..		W
4 pole; 2-0-1	TM-4-8213/..		W
1 pole; 2-0-1		T0-1-15421/..	H1
2 pole; 2-0-1		T0-2-15422/..	H1
3 pole; 2-0-1		T0-3-15423/..	H1
Selector switch via 0 position			
1 pole; 1-2	TM-1-8220/..		X
2 pole; 1-2	TM-2-8221/..		X
3 pole; 1-2	TM-3-8222/..		W
4 pole; 1-2	TM-4-8223/..		W
5 pole; 1-2	TM-5-8369/..		W
6 pole; 1-2	TM-6-8370/..		W
Manual/automatic switch with 0 position			
1 pole; manual-0-auto	TM-1-15431/..		X
2 pole; manual-0-auto	TM-2-15432/..		X
3 pole; manual-0-auto	TM-3-15433/..		W
1 pole; manual-0-auto		T0-1-15431/..	H1
2 pole; manual-0-auto		T0-2-15432/..	H1
3 pole; manual-0-auto		T0-3-15433/..	H1
without 0 position			
1 pole; manual-auto		T0-1-15451/..	H1
2 pole; manual-auto		T0-2-15452/..	H1
3 pole; manual-auto		T0-3-15453/..	H1
with button function for manual			
1 pole; manual->0-auto		T0-1-15434/..	H1
2 pole; manual->0-auto		T0-2-15435/..	H1
1 pole; auto-0-manual<-start		T0-2-15907/..	H1

Basic switch type	TM	T0	Construction typ group
Max. rated uninterrupted current I_u	10 A	20 A	
Measurement selector switch voltage			
3x phase-phase with 0 position		T0-2-15920/..	H1
3x phase-phase without 0 position		T0-2-15922/..	H1
3x phase-N with 0 position		T0-2-15921/..	H1
3x phase-phase and 3x phase-N with 0 position		T0-3-8007/..	H1
3x phase-phase and 3x phase-N without 0 position, complete rotation advance/retract		T0-3-15924/..	H1
Current selector switch			
0-L1-L2-L3, complete rotation advance/retract		T0-3-8048/..	H1
Measurement selector switch voltage and current			
1-0-2-0, complete rotation advance/retract, measurement viatransducer		T0-3-8030/..	H1
Control circuit isolater 90°			
1 pole, 0-1, red handle yellow locking collar		TM-1-8290/E/SVB	–[1]
1 pole, 0-1, black rotary handle/locking collar		TM-1-8290/E/SVB-SW	–[1]
2 pole, 0-1, red handle yellow locking collar		TM-1-8291/E/SVB	–[1]
2 pole, 0-1, black rotary handle/locking collar		TM-1-8291/E/SVB-SW	–[1]
3 pole, 0-1, red rotary handle yellow locking collar		TM-2-8292/E/SVB	–[1]
3 pole, 0-1, black rotary handle/locking collar		TM-2-8292/E/SVB-SW	–[1]
3 pole + N, 0-1, red rotary handle yellow locking collar		TM-2-8293/E/SVB	–[1]
3 pole + N, 0-1, black rotary handle/locking collar		TM-2-8293/E/SVB-SW	–[1]
6 pole, 0-1, red rotary handle yellow locking collar		TM-3-8326/E/SVB	–[1]
6 pole, 0-1, black rotary handle/locking collar		TM-3-8326/E/SVB-SW	–[1]

Notes: [1] The listed switch designations without constructions type designation (A-Z) are completed types

Practical Installation



Screening connection to the switch enclosure!

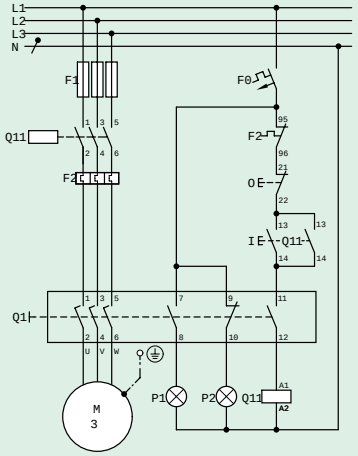
The actuation of three-phase motors is implemented more and more frequently via electronic speed encoders. The motor cable is screened in order to comply with the EMC guidelines. We can provide a mounting plate screen for simple and fast application of the screen with a maintenance and manual override switch.

CI-K the clever enclosure

The enclosure CI-K has a unique combination: plastic insulated housing with flexible push-through diaphragm for main and control cables. Enclosure sizes I1 and I2 provide faster connection from above, below or from the rear. The sizes I3 to I5 provide the push-through diaphragm for the control cables.

Safety switch with load shedding and signalling

The safety switches P and T are functionally designed as maintenance and manual override switches. Safe isolation of a load from the mains is the primary function. The switch can be loaded with rated uninterrupted current I_u due to the load shedding circuit. The switch switches without a load! The additional signalling contacts can be used for indicating the switch position. The respective processing and use in the application program of the system enhances safety.



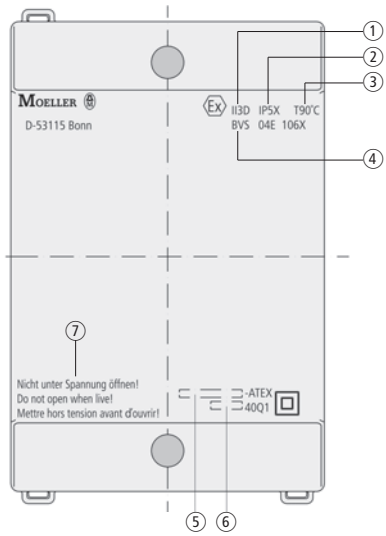
P1 = on
P2 = off
Q11 = load shedding

Rotary switch T and Switch-disconnector P with ATEX approval

The surface mounting switches in the Product Overview and our main catalogue and the basic types mentioned can be ordered with the approval to ATEX guideline 94/9 EC.
The listed circuits are complemented by special circuits.

ATEX rotary switches T
- **T0-.../I1** up to 20 A
- **T3-.../I2** up to 32 A
- **T5B-.../I4** up to 63 A
- **T5-.../I5** up to 100 A

ATEX switch-disconnector P
- **P1-25/I2** up to 25 A
- **P1-32/I2** up to 32 A
- **P3-63/I4** up to 63 A
- **P3-100/I5** up to 100 A



1. **categories**
2. **degree of protection**
3. **temperature class**
4. **test numbers**
5. **type**
6. **production code**
7. **warning text**

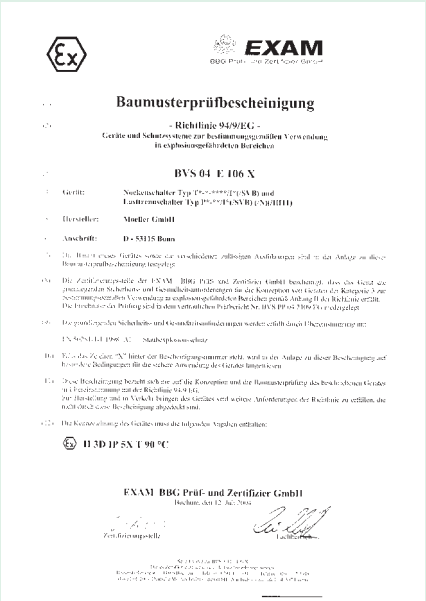
The marking of the housing is conform to the ATEX guideline 94/9 EC.

www.moeller.net/atex

ATEX = **At**mospheres **Ex**plosibles = explosive atmospheres

Moeller now offers the following in conformity with the manufacturers guidelines: ATEX guideline 94/9 EC (mandatory from 06/2003) rotary switches T from 20 A to 100 A and switch-disconnectors P from 25 A to 100 A. The switches are approved for device group II, with area of application "all except mining" as well as for category 3. The approval has the test number BVS 04 E 106 X. The devices are marked with equipment designation EX II3D IP5X T90°C. According to the guideline for operators: ATEX guideline 1999/92/EC (mandatory from 06/2006) all the approved rotary switches and switch-disconnectors with test number BVS 04 E 106 X can be used in dust areas, zone 22, category 3.

The rotary switches and switch-disconnectors in surface mounting enclosures with the ATEX approval are used in dust hazard areas, for example in mills, metal grinding plants, wood processing and wood process areas, cement factories, the aluminium industry, the foodstuffs industry, grain storage and processing facilities, agriculture, pharmaceutical industry, etc.


EXAM

Baumusterprüfbescheinigung

- Richtlinie 94/9/EG -

BVS 04 E 106 X

II 3D IP 5X T 90 °C

EXAM BBG Prüf- und Zertifizier GmbH

Approval certificate for use of the Moeller rotary switch T and switch-disconnector P in surface mounting enclosure conform to ATEX guideline 94/9 EC.

Content