SERIES 1045 - SUBMINIATURE SNAP-ACTION SWITCH IP 67

TO 10(3) A 250 V AC 1E4



PRODUCT FEATURES

- Dust and water protected switching system according IP 67
- Rating from low DC signal currents to ratings of 10 (3)A 250 VAC
- Versions for high motor rating up to 6 (6) A 250 VAC
- Versions with integrated mechanism for breaking contact weldings
- IEC 60335 Chapter 30 approved for household appliances
- More than 10 million switching cycles

ON REQUEST

- Versions with reduced difference travel
- Versions with mounting pegs to the side
- With asymmetric pinning
- With customized wiring

Design	DIN 41635 B
Mechanical life endurance	10E6, tightness up to 1.5E6 cycles 1E6 (versions with auxiliary actuator)
Contact resistance (new condition)	< 100 mOhm (1 A 12 V DC)
Insulation resistance (new condition)	> 100 MOhm (500 V DC)
Proof tracking	250 PTI
Protection type	IP 00 terminal side basic types 1045 and 1046 IP 40 actuator side basic type 1046 IP 67 actuator side basic type 1045, terminal and actuator side basic type 1048
Ambient temperature	-40 °C ... +100 °C
Flammability	UL 94 V-0
Glow wire test temperature	850 °C
Material additional actuator housing terminals	stainless steel spring steel PA Latamid glass fiber-reinforced tinned / faston terminals blank
Bounce time	< 5 ms
Approval marks	/ (61058)
Suitable for appliances of protection class II under compliance with the installation conditions required on the equipment side	

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	Normally closed contact (SPNC)	1045.0142	1045.1943	Normally open contact (SPNO)	1045.0122	1048.1132	Changeover switch (SPDT momentary)	1045.0102	1045.0151	1045.0903	1045.1103	1045.1151	1045.2101	1045.2251	1045.2702	1045.3102
5 (5) A 250 V AC 10E3								o								o
1 A 250 V AC 100E3									o			o		o		
3 (3) A 250 V AC 30E3						o									o	
6 (1) A 250 V AC 30E3																
2 (1) A 250 V AC 100E3					o								o			
3 A 250 V AC 100E3		o														
10 (3) A 250 V AC 10E3										o	o					
6 (6) A 250 V AC 30E3			o													
Terminal type																
Terminal description		sealed	2.8 x 0.5 sealed		sealed			sealed	sealed	sealed	2.8 x 0.5 sealed	2.8 x 0.5 sealed	sealed cranked	sealed coded cranked	sealed coded cranked	sealed
Contact material		Ag	Ag		Ag	Ag		Ag	Au	Ag	Ag	Au	Ag	Au	Ag	Ag
Operating force (N)		≤ 2.6	≤ 3.2		≤ 2.6	≤ 2.6		≤ 2.6	≤ 1.9	≤ 3.2	≤ 3.2	≤ 1.9	≤ 1.9	≤ 1.9	≤ 2.6	≤ 2.6
Operating position (OP) (mm)		8.4 ±0.3	8.4 ±0.3		8.4 ±0.3	8.4 ±0.3		8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3
Difference travel max. (mm)		0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
Free position (FP) max. (mm)		9.3	9.3		9.3	9.3		9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Permissible total travel position (TP) (mm)		7.6	7.6		7.6	7.6		7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Actuator		IP 67	IP 67		IP 67	IP 67		IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
Actuator description		▢	▢		▢	▢		▢	▢	▢	▢	▢	▢	▢	▢	▢
Lever drawing																
Miscellaneous			with positive action on NC side							with positive action on NC side						
Stock version						o		o	o	o	o	o		o	o	o

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	Changeover switch (SPDT momentary)	1045.3151	1045.4102	1045.4151	1045.5102	1045.5112	1045.5502	1045.5512	1045.6102	1045.6502	1045.7102	1045.7502	1046.0104	1046.1103	1046.2904	1048.0151
5 (5) A 250 V AC 10E3			o													
1 A 250 V AC 100E3		o		o												o
3 (3) A 250 V AC 30E3																
6 (1) A 250 V AC 30E3					o	o	o	o	o	o	o	o				
2 (1) A 250 V AC 100E3																
3 A 250 V AC 100E3																
10 (3) A 250 V AC 10E3														o		
6 (6) A 250 V AC 30E3													o		o	
Terminal type		J	L	L	G	G	G	G	J	J	T	T	G	J	T	I
Terminal description		sealed	sealed	sealed	sealed	sealed	sealed	sealed	2.8 x 0.5 sealed	2.8 x 0.5 sealed	sealed cranked	sealed cranked	sealed	2.8 x 0.5 sealed	sealed cranked	
Contact material		Au	Ag	Au	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Au
Operating force (N)		≤ 1.9	≤ 2.6	≤ 1.9	≤ 0.7	≤ 2.0	≤ 0.7	≤ 2.0	≤ 0.9	≤ 0.9	≤ 0.9	≤ 0.9	≤ 2.8	≤ 2.8	≤ 2.8	≤ 1.9
Operating position (OP) (mm)		8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	11.1 ±1.5	9.5 ± 1.0	16.2 ±1.5	15 ±1	11.1 ±1.5	16.2 ±1.5	11.1 ±1.5	16.2 ±1.5	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3	8.4 ±0.3
Difference travel max. (mm)		0.2	0.2	0.2	0.8	0.7	0.7	0.7	1.0	1.0	1.0	1.0	0.2	0.2	0.2	0.2
Free position (FP) max. (mm)		9.3	9.3	9.3	15	12	20	17	15	20	15	20	9.3	9.3	9.3	9.3
Permissible total travel position (TP) (mm)		7.6	7.6	7.6	7.6	8	13	13.6	7.6	13	7.6	13	7.6	7.6	7.6	7.6
Actuator		IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 40	IP 40	IP 40	IP 67
Actuator description		▢	▢	▢	—	—	⌐	⌐	—	⌐	—	⌐	▢	▢	▢	▢
Lever drawing					L02	L02	L22	L22	L02	L22	L02	L22				
Miscellaneous						lever on NC side mounted		lever on NC side mounted							with positive action on NC side	
Stock version		o	o	o	o	o	o	o	o	o	o	o	o	o	o	o

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	Changeover switch (SPDT momentary)	1048.1102	1048.2151	1048.6113
				
5 (5) A 250 V AC 10E3				
1 A 250 V AC 100E3			o	
3 (3) A 250 V AC 30E3		o		
6 (1) A 250 V AC 30E3				
2 (1) A 250 V AC 100E3				
3 A 250 V AC 100E3				
10 (3) A 250 V AC 10E3				o
6 (6) A 250 V AC 30E3				
Terminal type				
Terminal description				
Contact material		Ag	Au	Ag
Operating force (N)		≤ 2.6	≤ 1.9	≤ 2.0
Operating position (OP) (mm)		8.4 ±0.3	8.4 ±0.3	15 ±1
Difference travel max. (mm)		0.2	0.2	0.7
Free position (FP) max. (mm)		9.3	9.3	17
Permissible total travel position (TP) (mm)		7.6	7.6	13.6
Actuator		IP 67	IP 67	IP 67
Actuator description				
Lever drawing				L22
Miscellaneous		cable outlet on actuator side	cable outlet down	lever on NC side mounted
Stock version		o	o	o

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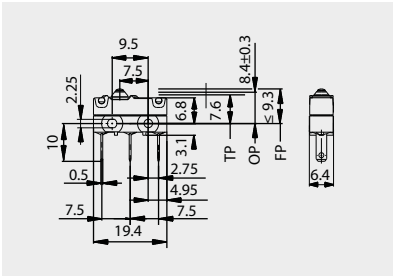
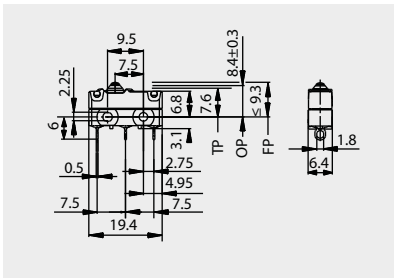
TO 10(3) A 250 V AC 1E4



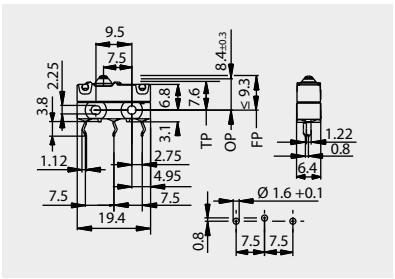
Basic type 1045



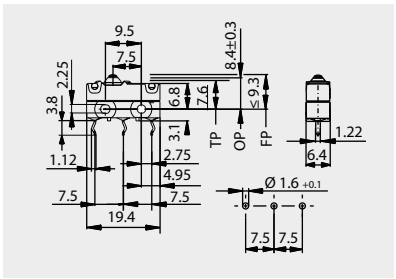
Quick-connect terminal 2.8 x 0.5
sealed



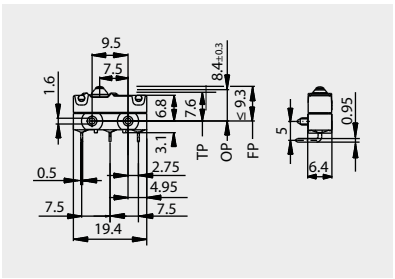
Solder terminal
sealed



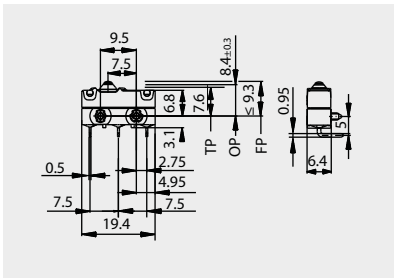
PCB terminal
sealed, coded, cranked



PCB terminal
sealed, cranked



PCB terminal
sealed, left angled



PCB terminal
sealed, right angled

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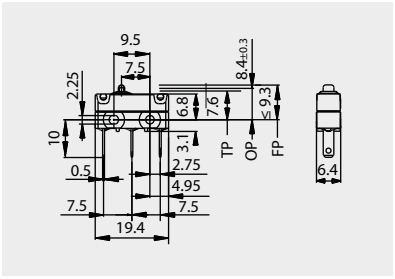
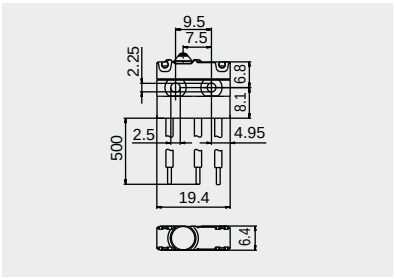
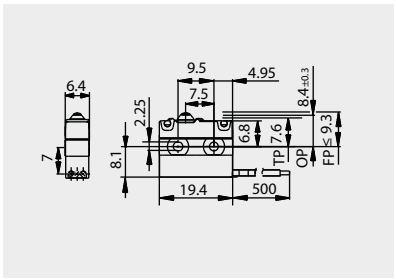


Basic type 1046

Quick-connect terminal 2.8 x 0.5 sealed





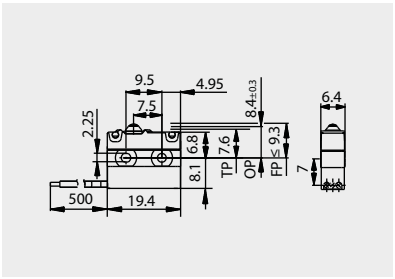


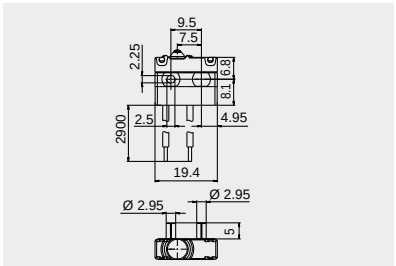
Basic type 1048

Wires potted with switch, wire ends tinned

Cable, outlet down

Cable, outlet NC side





Cable, outlet C side

Cable, outlet down, normally open contact, mounting pegs

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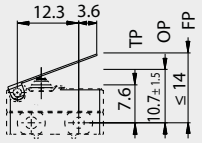
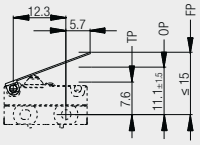
Auxiliary actuators

The auxiliary actuators are available as additional parts for later assembly or are already pre-assembled depending on the product. In the adjustable versions the operating position can be set application-specifically by the set screw.

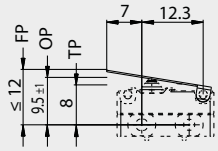
Switch versions without positive action feature a lever mounting point on the C and NC side, those with positive action only on the C side.



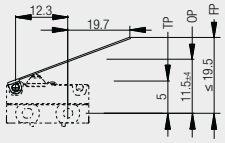
L01: straight lever
191.071.011



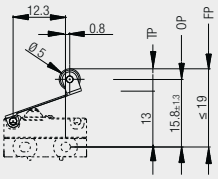
L02: straight lever
191.071.021



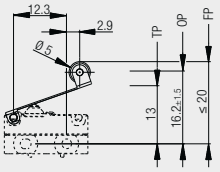
L02: straight lever, mounted on NC side
191.071.021



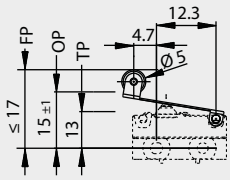
L03: straight lever
191.071.101



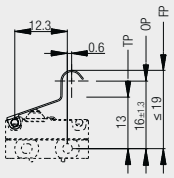
L11: roller lever
191.078.023



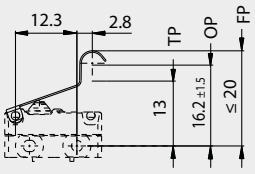
L12: roller lever
191.078.023



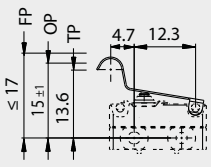
L12: roller lever, mounted on NC side
191.078.023



L21: simulated roller
191.071.041



L22: simulated roller
191.071.051



L22: simulated roller, mounted on NC side
191.071.051

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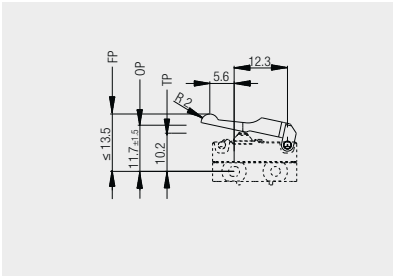
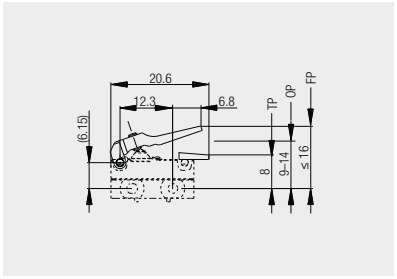
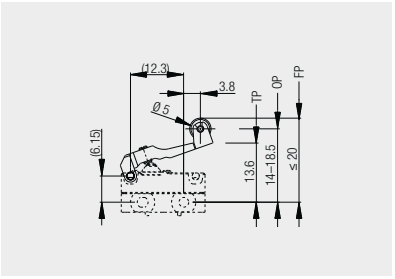
Auxiliary actuators
(continue from page 195)



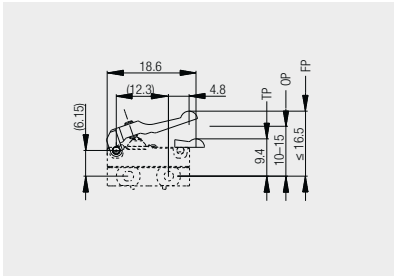
L32: simulated roller, mounted on NC side
190.372.041



L41: adjustable plastic lever
190.075.013



L43: adjustable roller lever
190.072.013

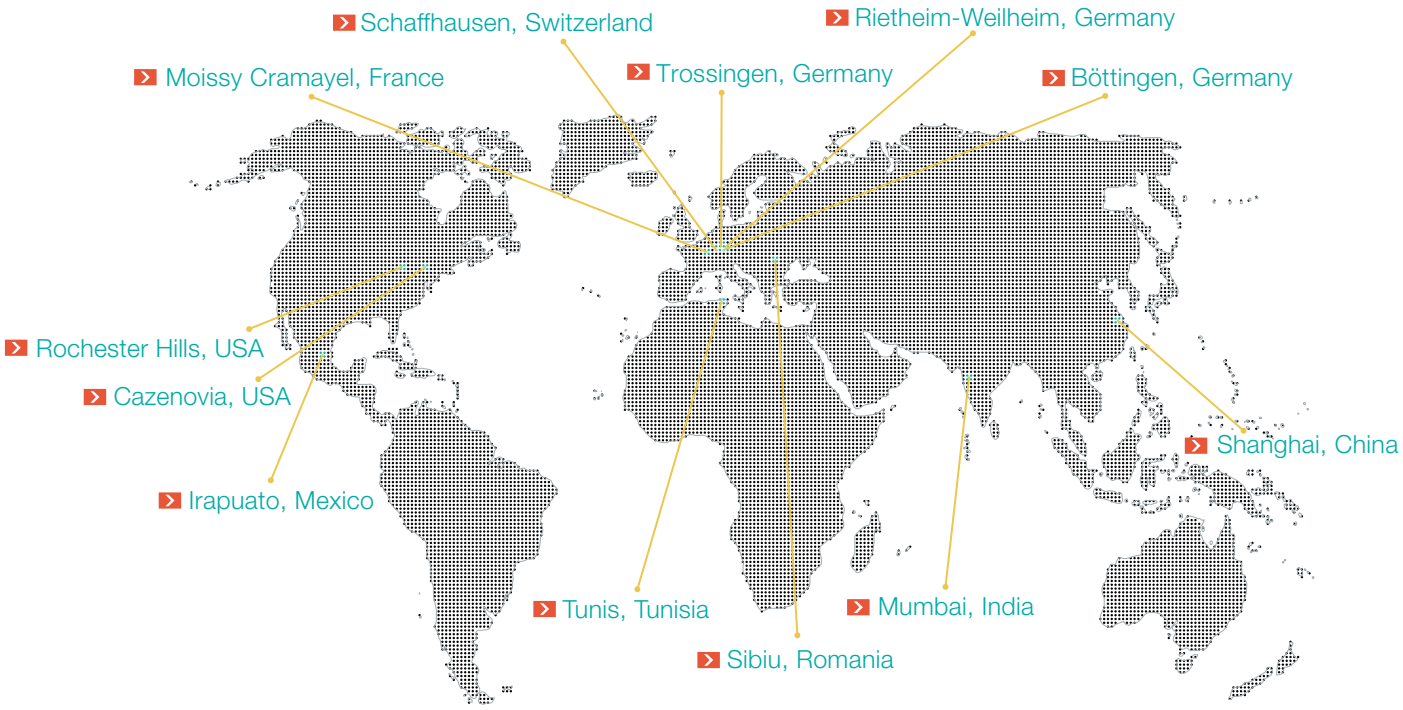


L45: adjustable simulated roller
190.074.013

Further information under

WWW.MARQUARDT-SWITCHES.COM

MARQUARDT INTERNATIONAL.



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