



# 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	

ROCKER SWITCHES  
 PUSHBUTTON SWITCHES  
 TOGGLE SWITCHES  
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 SENSORS  
 ECO  
 PUSH IN DRIVE



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TO 10(3) A 250 V AC 1E4

	Normally closed contact (SPNC)		Normally open contact (SPNO)		Changeover switch (SPDT momentary)	
5 (5) A 250 V AC 10E3						○
1 A 250 V AC 100E3						○
3 (3) A 250 V AC 30E3						
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					○	
6 (6) A 250 V AC 30E3		○				
Terminal type						
Terminal description	sealed	2.8 x 0.5 sealed	sealed	sealed	2.8 x 0.5 sealed	2.8 x 0.5 sealed
Contact material	Ag	Ag	Ag	Ag	Ag	Au
Operating force (N)	≤ 2.6	≤ 3.2	≤ 2.6	≤ 2.6	≤ 2.6	≤ 1.9
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
Difference travel max. (mm)	0.2	0.2	0.2	0.2	0.2	0.2
Free position (FP) max. (mm)	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
Actuator	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				○		
		1045.0142		1045.0122		1045.0102
		1045.1943		1048.1132		1045.0151
						1045.0903
						1045.1103
						1045.1151
						1045.2101
						1045.2251
						1045.2702
						1045.3102

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MIKRO-SIGNALSCHALTER

SENSORS

ECO

PUSH/DRIVE

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# SERIES 1045 - SUBMINIATURE SNAP-ACTION SWITCH IP 67

TO 10(3) A 250 V AC 1E4

		<b>Changeover switch (SPDT momentary)</b>				
5 (5) A 250 V AC 10E3					1048.1102	
1 A 250 V AC 100E3						○
3 (3) A 250 V AC 30E3	○					
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						○
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	○	○	○			

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SENSORS

ECO

PUSH/NDRIVE

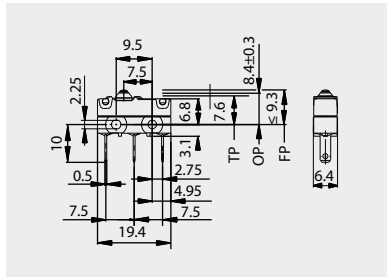


# SERIES 1045 - SUBMINIATURE SNAP-ACTION SWITCH IP 67

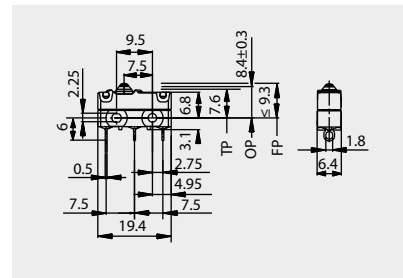
TO 10(3) A 250 V AC 1E4



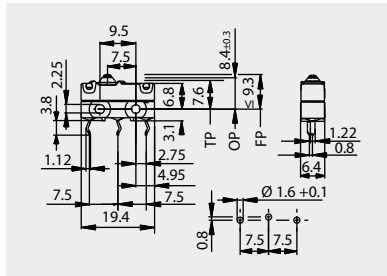
Basic type 1045



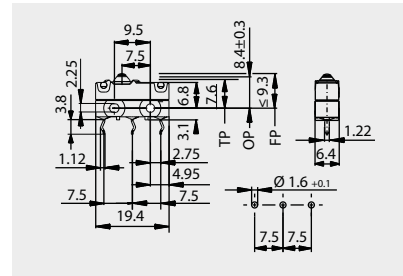
Quick-connect terminal 2.8 x 0.5 sealed



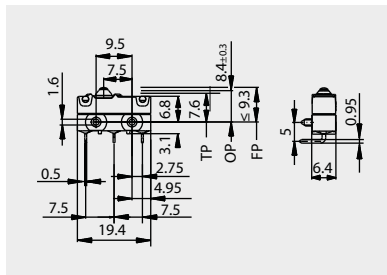
Solder terminal sealed



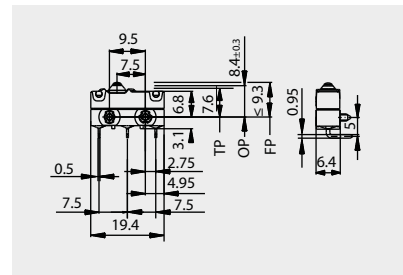
PCB terminal sealed, coded, cranked



PCB terminal sealed, cranked



PCB terminal sealed, left angled



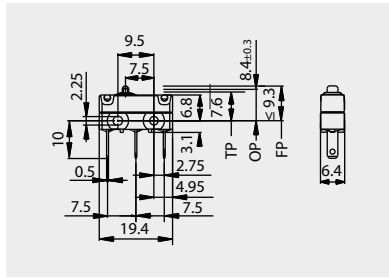
PCB terminal sealed, right angled

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TO 10(3) A 250 V AC 1E4

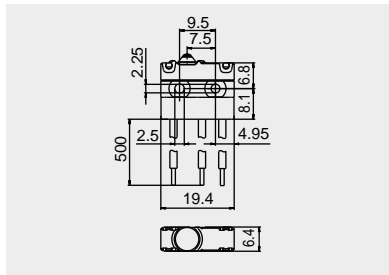


Basic type 1046

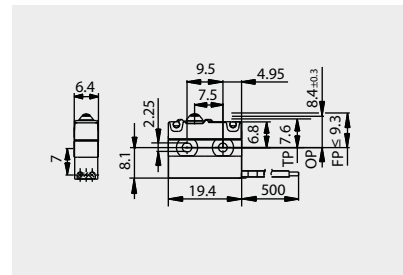
Quick-connect terminal 2.8 x 0.5 sealed



Basic type 1048

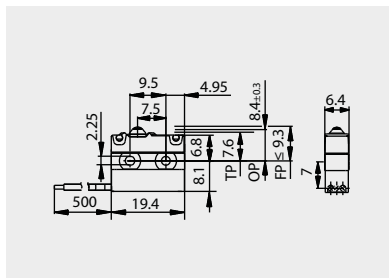


Cable, outlet down

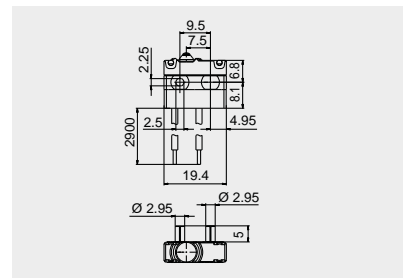


Cable, outlet NC side

Wires potted with switch, wire ends tinned



Cable, outlet C side



Cable, outlet down, normally open contact, mounting pegs

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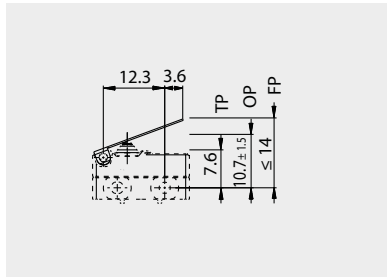
TO 10(3) A 250 V AC 1E4



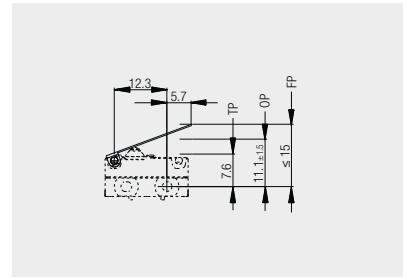
## Auxiliary actuators

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.

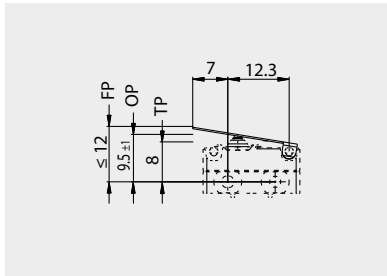
Switch versions without positive action feature a lever mounting point on the C and NC side, those with positive action only on the C side.



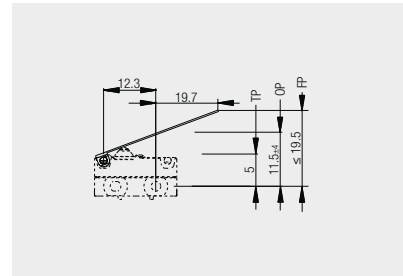
L01: straight lever  
191.071.011



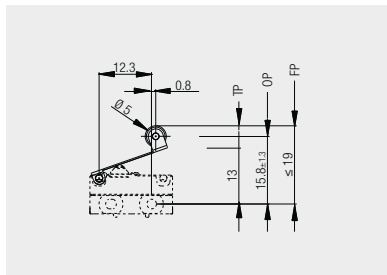
L02: straight lever  
191.071.021



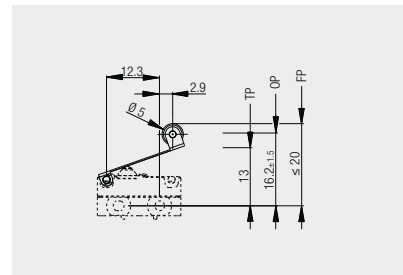
L02: straight lever, mounted on NC side  
191.071.021



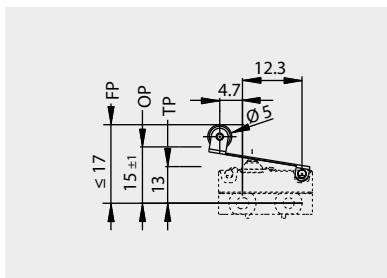
L03: straight lever  
191.071.101



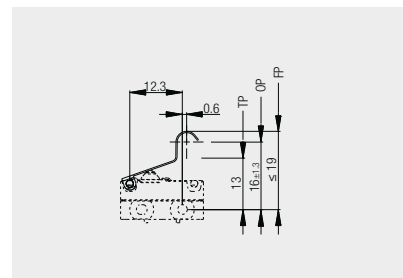
L11: roller lever  
191.078.023



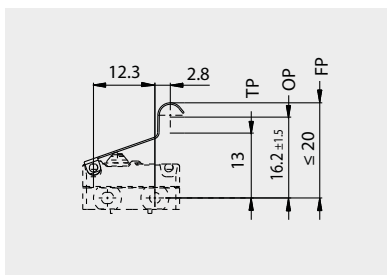
L12: roller lever  
191.078.023



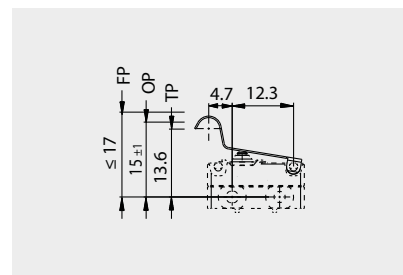
L12: roller lever, mounted on NC side  
191.078.023



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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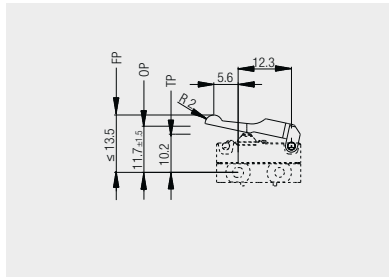


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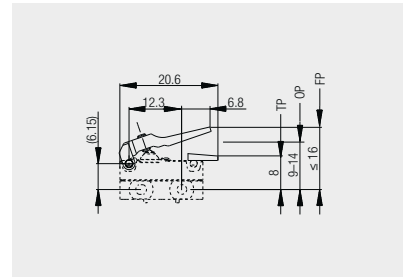
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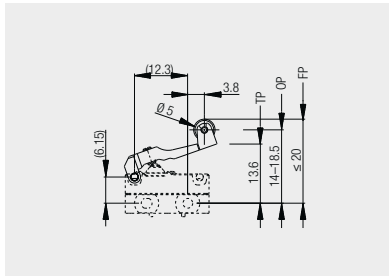
Auxiliary actuators  
(continue from page 195)



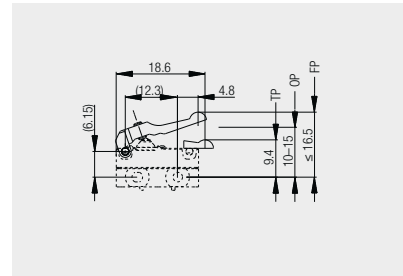
L32: simulated roller, mounted on NC side  
190.372.041



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](http://WWW.MARQUARDT-SWITCHES.COM)

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**SNAP-ACTION SWITCHES**

MICRO-SIGNAL SWITCHES

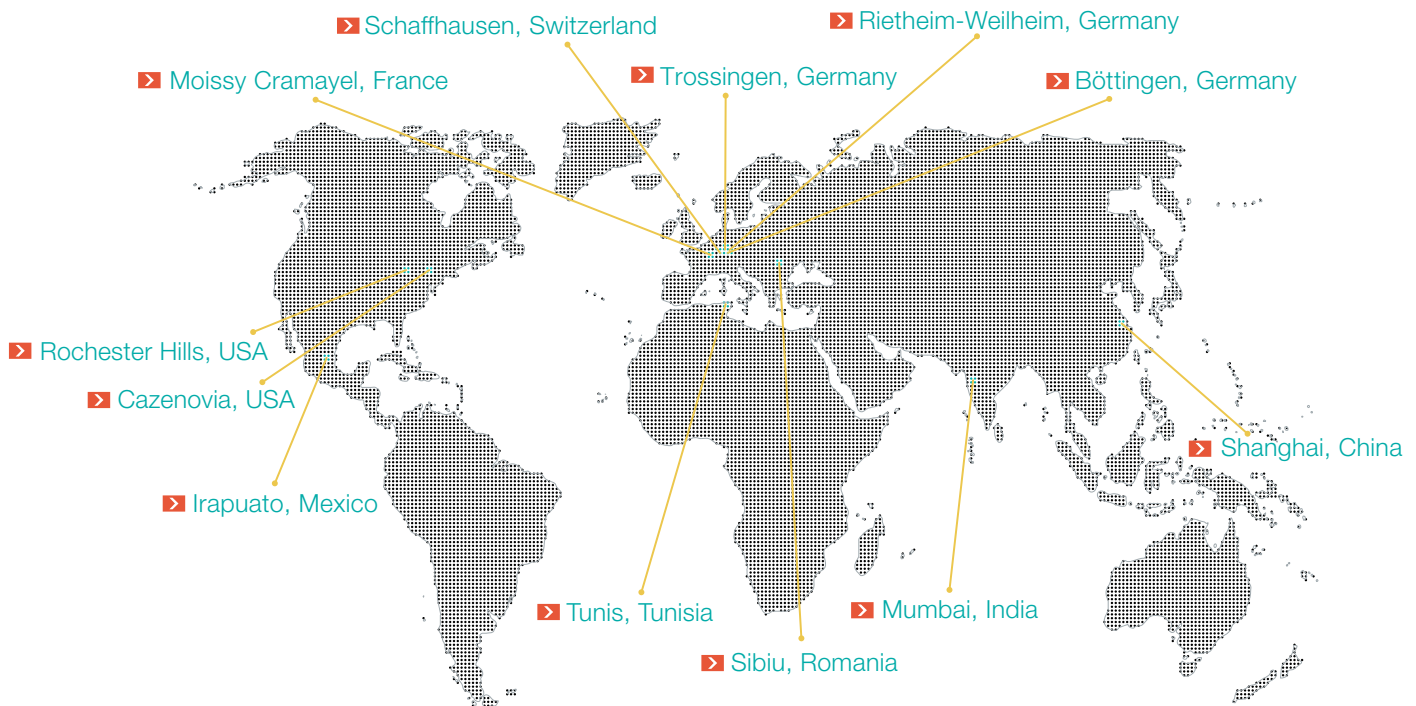
SENSORS

ECO

PUSH'DRIVE



# MARQUARDT INTERNATIONAL.



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