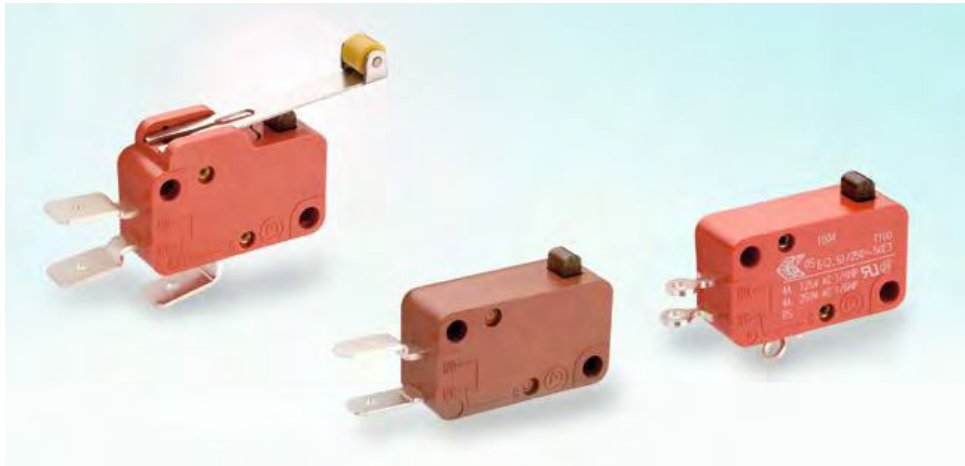




SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC



PRODUCT FEATURES

- Friction contact system whose shearing movement can loosen welding
- Very high inrush currents (capacitive)
- Contact distances less and greater than 3 mm
- Operating forces from 0.2 to 4.2 N

ON REQUEST

- Material conformant with the filament wire test acc. to IEC 60335-1:2001 chap. 30
- Side bearing terminal
- Electrical rating 16 (16) A 250 V 5E4 for normally closed and normally open version

Design	DIN 41635 A
Mechanical life endurance	5E6 version with lever or contact spacing > 3 mm 10E6 standard version 5E4 version with curved spring steel lever
Contact resistance (new condition)	< 100 mOhm (1 A 12 V DC)
Insulation resistance (new condition)	> 100 MOhm (500 V DC)
Proof tracking	250 PTI
Ambient temperature	-40 °C ... +100 °C on request ... +125 °C ... +85 °C
Flammability	UL 94 (housing: V-0, actuator: V-2) UL 94 V-2
Glow wire test temperature	850 °C
Material additional actuator housing terminals	galvanized steel / spring steel / stainless steel Duroplast type 182 / PA glass fiber-reinforced / PA Latamid silver plated / chromated
Bounce time	< 10 ms
Approval marks	
Suitable for appliances of protection class II under compliance with the installation conditions required on the equipment side	

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

ECO




























PUSH/DRIVE



SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC
































- PUSH/TOGGLE
- ECO
- SENSORS
- MIPRO-SIGNALSCHALTER
- SNAP-ACTION SWITCHES
- TACT AND KEY SWITCHES
- FOOT SWITCHES
- ROTARY SWITCHES
- SLIDE SWITCHES
- TOGGLE SWITCHES
- PUSHBUTTON SWITCHES
- ROCKER SWITCHES

	Normally closed contact (SPNC)			Normally open contact (SPNO)			Changeover switch (SPDT momentary)						
	1005.1105	1005.1101	1006.3402	1005.2809	1005.1207	1005.1226	1005.2505	1005.0904	1005.1204	1005.1201	1005.4001	1005.0404	1005.1004
													
21 (8) A 250 V AC 25E3													
20 (4) A 400 V AC 1E4													
16 (16) A 250 V AC 5E4													
16 (4) A 400 V AC 5E4													
16 (4) A 250 V AC 5E4													
16 (4) A 250 V AC 25E3													
12 (12) A 250 V AC 5E4													
10 (6) A 250 V AC 5E4	o												
10 (4) A 400 V AC 1E4		o											
10 (4) A 250 V AC 5E4			o										
8 (8) A 250 V AC 5E4				o									
6 (2.5) A 400 V AC 5E4			o										
6 (2.5) A 250 V AC 5E4										o			
21 A 250 V AC 2 HP				o									
21 A 125 V AC 1 HP				o									
16 A 250 V AC 2 HP						o							
16 A 125 V AC 1 HP						o							
16 A 125 - 250 V AC 1/2 HP					o							o	
10 A 125 - 250 V AC 1/2 HP	o												
10 A 125 - 250 V AC 1/4 HP		o						o					
8 A 125 - 250 V AC 1/3 HP			o						o				
4 A 125 - 250 V AC 1/6 HP										o			
Terminal type													
Terminal description	6.3	6.3	6.3	4.8 top side	6.3	6.3 straight	4.8 straight		6.3	6.3			6.3
Contact distance (mm)	Ag > 3	Ag < 3	Ag > 3	Ag > 3	Ag < 3	Ag < 3	Ag > 3	Ag > 3	Ag > 3	Ag < 3	Ag < 3	Ag < 3	Ag < 3
Contact material	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag
Operating force (N)	2,6-4,2	1,5-2,5	1,6-2,8	2,4-3,8	2,4-3,8	2,4-3,8	3,5-4,9	2,4-3,8	2,4-3,8	1,5-2,5	1,5-2,5	2,4-3,8	2,4-3,8
Operating position (OP) (mm)	14,6±0,4	14,8±0,4	20,5±0,4	14,5±0,3	14,7±0,5	14,7±0,5	14,4±0,3	14,4±0,3	14,4±0,3	14,7±0,5	14,7±0,5	14,7±0,5	14,7±0,5
Difference travel max. (mm)	1,0	0,3	1,0	1,2	0,3	0,3	1,2	1,2	1,2	0,3	0,3	0,3	0,3
Free position (FP) max. (mm)	16	16	22,0	16	16	16	16	16	16	16	16	16	16
Permissible total travel position (TP) (mm)	13,4	13,4	19,3	13,4	13,4	13,4	13,4	13,4	13,4	13,4	13,4	13,4	13,4
Actuator description													
Lever drawing			L21										
Miscellaneous													
Stock version	o	o			o				o			o	o



SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC

		Changeover switch (SPDT momentary)														
		1006.1514	1005.0507	1005.1010	1004.0509	1005.0101	1005.0401	1005.1001	1005.3501	1006.0701	1006.0901	1006.1011	1006.1101	1006.1201	1006.1301	1006.1401
																
21 (8) A 250 V AC 25E3																
20 (4) A 400 V AC 1E4		○														
16 (16) A 250 V AC 5E4																
16 (4) A 400 V AC 5E4		○														
16 (4) A 250 V AC 5E4			○	○												
16 (4) A 250 V AC 25E3					○											
12 (12) A 250 V AC 5E4																
10 (6) A 250 V AC 5E4		○	○													
10 (4) A 400 V AC 1E4						○		○								
10 (4) A 250 V AC 5E4					○											
8 (8) A 250 V AC 5E4				○												
6 (2.5) A 400 V AC 5E4						○										
6 (2.5) A 250 V AC 5E4							○									
21 A 250 V AC 2 HP																
21 A 125 V AC 1 HP																
16 A 250 V AC 2 HP																
16 A 125 V AC 1 HP																
16 A 125 - 250 V AC 1/2 HP		○	○		○											
10 A 125 - 250 V AC 1/2 HP				○												
10 A 125 - 250 V AC 1/4 HP						○										
8 A 125 - 250 V AC 1/3 HP								○								
4 A 125 - 250 V AC 1/6 HP									○							
Terminal type																
Terminal description		6.3		6.3		M3		6.3				6.3	6.3	6.3	6.3	6.3
Contact distance (mm)		< 3	< 3	> 3	< 3			< 3				< 3	< 3	< 3	< 3	< 3
Contact material		Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag
Operating force (N)		1.2-2.1	2.4-3.8	2.4-3.8	0.8-1.8	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5	0.8-1.4	0.7-1.25	1.5-2.5	1.5-2.5	0.3-0.65	0.8-1.4
Operating position (OP) (mm)		20.8±1.2	14.7±0.5	14.4±0.3	14.7±0.5	14.7±0.5	14.7±0.5	14.7±0.5	20.8±0.5	15.4±1.2	20.8±1.2	15.3±0.5	20.8±0.5	15.7±2.7	15.4±1.2	
Difference travel max. (mm)		0.9	0.3	1.2	0.1 - 0.25	0.3	0.3	0.3	0.3	0.7	0.9	0.3	0.3	1.8	0.7	
Free position (FP) max. (mm)		23.5	16	16	16	16	16	16	22.1	18.2	23.5	16.8	22.1	21.5	18.2	
Permissible total travel position (TP) (mm)		18	13.4	13.4	13.4	13.4	13.4	13.4	18.5	12.6	18	14	18.5	9.8	12.6	
Actuator description																
Lever drawing		L12							L11	L02	L12	L01	L11	L04	L02	
Miscellaneous					milled bearing blade											
Stock version						○	○	○		○	○		○	○	○	○




















SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC

- PUSH/ON/ON
- ECO
- SENSORS
- MIPFO-SIGNALSCHALTER
- SNAP-ACTION SWITCHES
- TACT-AND KEY SWITCHES
- FOOT SWITCHES
- ROTARY SWITCHES
- SLIDE SWITCHES
- TOGGLE SWITCHES
- PUSHBUTTON SWITCHES
- ROCKER SWITCHES

		Changeover switch (SPDT momentary)						
		1006.1511	1006.1801	1006.4103	1006.4203	1004.4601	1004.0402	1004.1002
21 (8) A 250 V AC 25E3								
20 (4) A 400 V AC 1E4								
16 (16) A 250 V AC 5E4								
16 (4) A 400 V AC 5E4								
16 (4) A 250 V AC 5E4								
16 (4) A 250 V AC 25E3								
12 (12) A 250 V AC 5E4								
10 (6) A 250 V AC 5E4								
10 (4) A 400 V AC 1E4	o	o	o					
10 (4) A 250 V AC 5E4					o			
8 (8) A 250 V AC 5E4								
6 (2.5) A 400 V AC 5E4	o	o	o	o				
6 (2.5) A 250 V AC 5E4						o		o
21 A 250 V AC 2 HP								
21 A 125 V AC 1 HP								
16 A 250 V AC 2 HP								
16 A 125 V AC 1 HP								
16 A 125 - 250 V AC 1/2 HP								
10 A 125 - 250 V AC 1/2 HP								
10 A 125 - 250 V AC 1/4 HP	o	o	o	o				
8 A 125 - 250 V AC 1/3 HP					o			
4 A 125 - 250 V AC 1/6 HP						o		o
Terminal type								
Terminal description	6.3	6.3	6.3		6.3	6.3		6.3
Contact distance (mm)	< 3	< 3	< 3		< 3	< 3		< 3
Contact material	Ag	Ag	Ag		Ag	Ag		Ag
Operating force (N)	0.7 - 1.25	1.5 - 2.5	1.5 - 2.5		1.5 - 2.5	0.5 - 1.1		0.2 - 0.6
Operating position (OP) (mm)	20.8 ± 1.2	22 ± 1	20.8 ± 0.5		20.8 ± 0.5	20.8 ± 0.5		14.7 ± 0.5
Difference travel max. (mm)	0.9	0.6	0.3		0.2	0.3		0.2
Free position (FP) max. (mm)	23.5	24.5	22.1		22.1	22.1		16
Permissible total travel position (TP) (mm)	18	18.5	19.5		19.5	19.5		13.4
Actuator description								
Lever drawing	L12	L31	L11		L11	L11		
Miscellaneous					milled bearing blade	milled bearing blade		milled bearing blade
Stock version	o					o		o

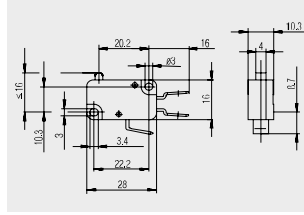


SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

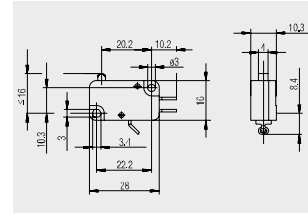
TO 21 (8) A 250 V AC



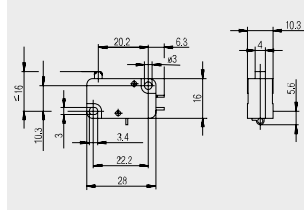
Basic type 1005



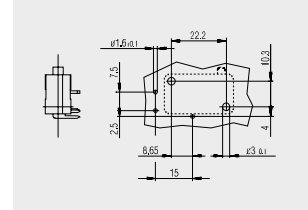
Quick-connect terminal 6.3 x 0.8



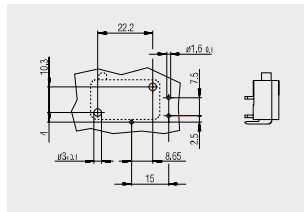
Solder terminal



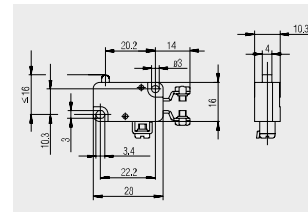
Short solder terminal



PCB terminal (cover side) right angled



PCB terminal (base side) left angled



Screw terminal M3

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

ECO

PUSH/DRIVE



SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

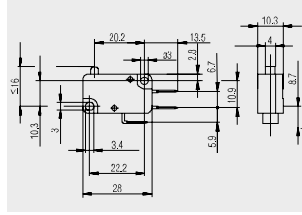
SENSORS

ECO

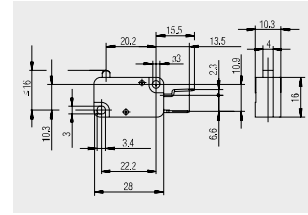
PUSH/DOME



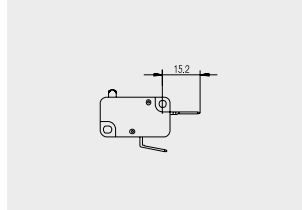
Basic type 1005



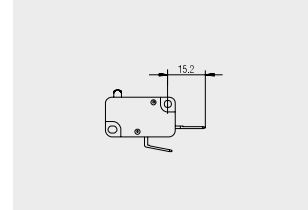
Quick-connect terminal 4.8 x 0.8 straight



Quick-connect terminal 4.8 x 0.8 top side



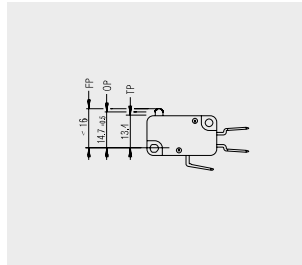
Quick-connect terminal 6.3 x 0.8 normally open contact version



Quick-connect terminal 6.3 x 0.8 normally closed contact version



Basic types 1004 and 1005 switching positions



FP: free position
OP: operating position
TP: permissible total travel position

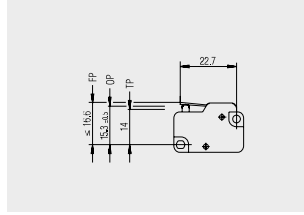


SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

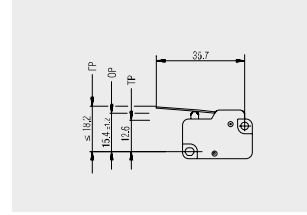
TO 21 (8) A 250 V AC



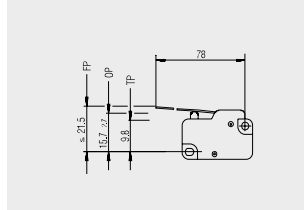
Basic type 1006
auxiliary actuator



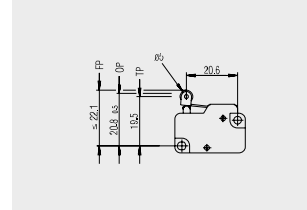
L01: straight lever



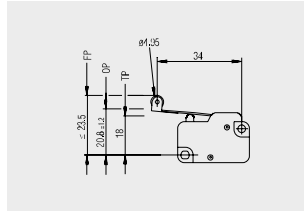
L02: straight lever



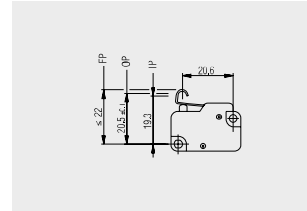
L04: straight lever



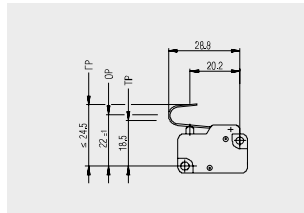
L11: roller lever



L12: roller lever



L21: simulated roller



L31: spring lever

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

ECC

PUSH/DRIVE



SERIES 1005 - MINIATURE SNAP-ACTION SWITCHES

TO 21 (8) A 250 V AC

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SWITCHES

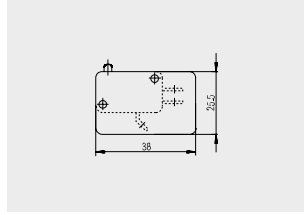
SENSORS

ECO

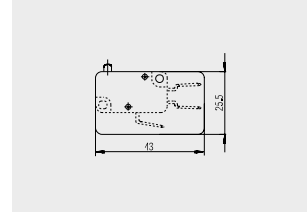
PUSH/DOME



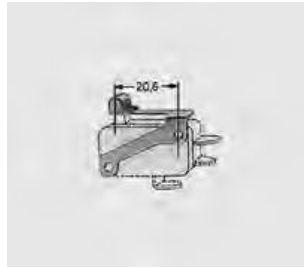
Additional parts



Insulating plate for solder terminal
0.5 mm: 231.009.011



Insulating plate for quick-connect terminal
0.5 mm: 231.010.011
0.8 mm: 231.010.021



191.013.013

Stainless spring steel

Lever 20.6 long with roller diameter 5 out of PA yellow (to be mounted lateral with the switch using screws)

Further information under

WWW.MARQUARDT-SWITCHES.COM