



SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

TO 16 (4) A / 12 (12) A 250 V AC



PRODUCT FEATURES

- Million times proven double lifting contact system with at least 100 000 mechanical switching cycles
- High electrical rating up to 16 A
- High mechanical load capacity up to 750 N (for foot actuation)
- Great variety
- Variable housing and pushbutton form with holders
- With pole separating wall (basic type 1689)

ON REQUEST

- Special plastics
- Other terminal variants
- Customized actuators and housing contours
- Cable assembly
- Behind PCB mountable variants

Mechanical life endurance	10E4
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 40
Ambient temperature	terminal side -20 °C ... +100 °C ... +105 °C ... +125 °C (product-dependent) actuating side -20 °C ... +55 °C
Flammability	UL 94 (actuator: V-0, socket: V-1, housing: V-2) UL 94 V-0 (product-dependent)
Glow wire test temperature	850 °C
Material actuator	PBTP / PA / PA (product-dependent)
housing	PA / PA glass fiber-reinforced / PA C3U / PA Latamid glass fiber-reinforced (product-dependent)
terminals	silver plated / tinned / copper bare (product-dependent)
Plug force of the terminals	≤ 80 N
Approval marks	 /  /  /  (product-dependent)
Suitable for appliances of protection class II	



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TO 16 (4) A / 12 (12) A 250 V AC

 single-pole	8 (8) A 250 V AC 1E4	16 (4) A 250 V AC 1E4	12 (12) A 250 V AC 5E4	12 (12) A 250 V AC 1E4	12 (8) A 250 V AC 1E4	10 (8) A 250 V AC 5E4	16 A 125 - 250 V AC	12 A 125 - 250 V AC 1/2 HP	5 A 125 V AC L	Terminal type	Terminal description	Contact distance (mm)	Contact material	Operating force (N)	Free position (FP) max. (mm)	Operating position (OP) (mm)	Permissible total travel position (TP) (mm)	EN 60335 cap. 30 conform “G”	Miscellaneous	Actuator description	Stock version	
	ON / OFF switch (SPST)																					
	1681.2102			○					○			vertical	≥ 3	Ag	7.0 ±2.5	26.5	23.8	22.2	○	resting pin		
	1681.3104			○					○			4.8 horizontal	≥ 3	Ag	7.0 ±2.5	26.5	23.8	22.2	○			
	1681.4403			○					○			horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7	○	resting pin		
	1681.4431			○			○		○			5.3 long horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.8		flange on the end faces		
	1681.1101					○	○		○			4.8 vertical	≥ 3	Ag	7.0 ±2.5	26.5	23.8	22.2				○
	1681.1702					○	○		○			4.8 vertical	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7	○			
	1681.3101					○	○		○			4.8 horizontal	≥ 3	Ag	7.0 ±2.5	26.5	23.8	22.2				
	1681.3701					○	○		○			4.8 horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7				
1681.4402					○	○		○			horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7		rest pin			
1681.4701					○	○		○			horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7		resting pin			
1681.5701												≥ 3	Ag	7.0 ±2.5	24	21.3	19.7					
Normally closed contact (SPNC)																						
1681.9408				○		○					horizontal	≥ 3	Ag	6.5 ±1.5	26.85	29.4	22.8		resting pin			
Normally open contact (SPNO)																						
1681.1354					○	○		○			4.8 vertical	≥ 3	Au	7.0 ±2.5	24	≤ 21.3	19.7	○	special housing contour			
1681.3501					○	○		○			4.8 horizontal	≥ 3	Ag	7.0 ±2.5	24	21.3	19.7					

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 'N' DRIVE

 double-pole	8 (8) A 250 V AC 1E4		○				○			6.3 vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7	○							
	16 (4) A 250 V AC 1E4		○				○			4.8 horizontal	≥ 3	Ag	9.0 ±3	24	≤ 20.95	19.7	○	special housing contour						
	12 (12) A 250 V AC 5E4				○			○		4.8 vertical	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2								
	12 (12) A 250 V AC 1E4					○	○		○		4.8 vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7	○						
	12 (8) A 250 V AC 1E4					○	○		○		vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7							
	10 (8) A 250 V AC 5E4						○		○		4.8 horizontal	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2							
	16 A 125 - 250 V AC										4.8 horizontal	≥ 3	Ag	9.0 ±3	24	23.8	22.2	○						
	12 A 125 - 250 V AC 1/2 HP										180° angled	≥ 3	Ag	9.0 ±3	24	21.3	19.8	○						
	5 A 125 V AC L										180° angled	≥ 3	Ag	10 ±3	0.4 ±0.3	2.3 ±0.3	3.9 ±0.3	○						
	Terminal type																							
Terminal description																								
Contact distance (mm)																								
Contact material																								
Operating force (N)																								
Free position (FP) max. (mm)																								
Operating position (OP) (mm)																								
Permissible total travel position (TP) (mm)																								
EN 60335 cap. 30 conform “G”																								
Miscellaneous																								
Actuator description																								
Stock version																								
ON / OFF switch (DPST)																								
1682.7704			○				○				6.3 vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7	○						
1689.3803			○		○		○				4.8 horizontal	≥ 3	Ag	9.0 ±3	24	≤ 20.95	19.7	○	special housing contour					
1682.1101								○	○			4.8 vertical	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2						
1682.1702								○	○			4.8 vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7	○					
1682.2701								○	○			vertical	≥ 3	Ag	9.0 ±3	24	21.3	19.7						
1682.3101								○	○			4.8 horizontal	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2						
1682.3702								○	○			4.8 horizontal	≥ 3	Ag	9.0 ±3	24	23.8	22.2	○					
1682.6101								○	○			180° angled	≥ 3	Ag	9.0 ±3	24	21.3	19.8	○					
1682.6401		○										180° angled	≥ 3	Ag	10 ±3	0.4 ±0.3	2.3 ±0.3	3.9 ±0.3	○					
Normally open contact (DPNO)																								
1689.4202			○				○	○		○			horizontal	≥ 3	Ag	9.0 ±3	24	≤ 20.95	19.7	○	rest pin			
1682.1201								○	○		○			4.8 vertical	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2				
1682.1902								○	○		○	○		4.8 vertical	≥ 3	Ag	9.0 ±3	28.8	26.1	24.5		with cap 205.021.011		
1682.3201								○	○		○			4.8 horizontal	≥ 3	Ag	9.0 ±3	26.5	23.8	22.2				

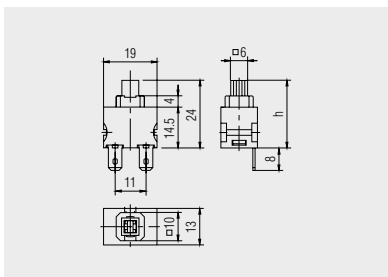


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

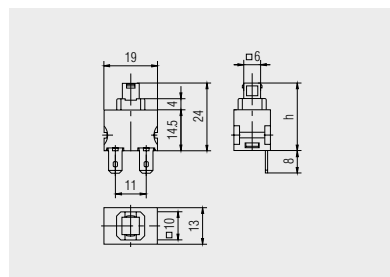
TO 16 (4) A / 12 (12) A 250 V AC



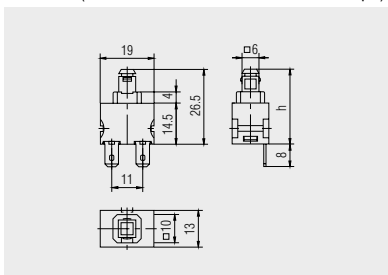
Basic type 1681
single-pole



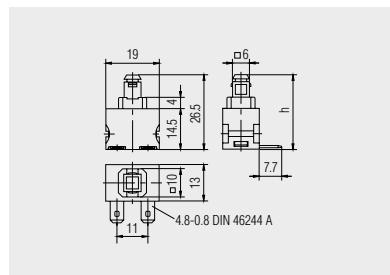
Quick-connect terminal 4.8 x 0.8
vertical
(actuator with holder for different caps)



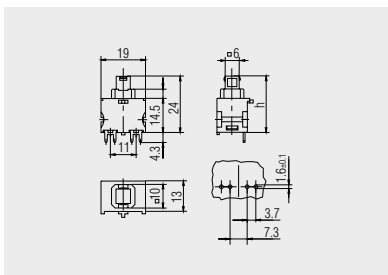
Quick-connect terminal 4.8 x 0.8
vertical (shortened actuator)



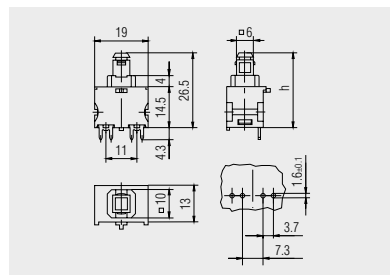
Quick-connect terminal 4.8 x 0.8
vertical (standard actuator)



Quick-connect terminal 4.8 x 0.8
horizontal (standard actuator)



PCB terminal vertical



PCB terminal vertical
(standard actuator)

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 'N' DRIVE

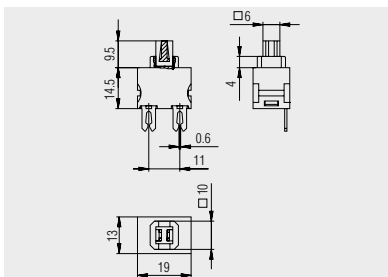


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

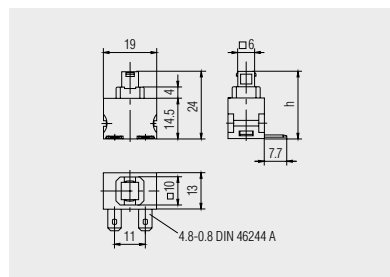
TO 16 (4) A / 12 (12) A 250 V AC



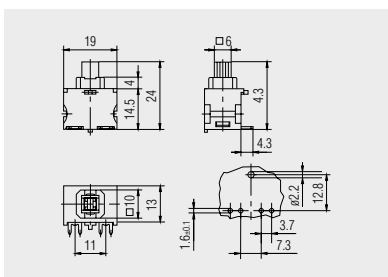
Basic type 1681
single-pole



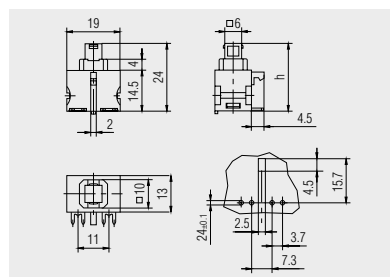
 Cut terminal
(actuator with holder for different caps)



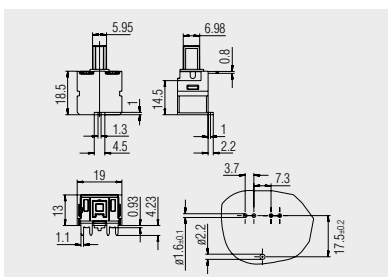
 Quick-connect terminal 4.8 x 0.8
horizontal (shortened actuator)



 PCB terminal horizontal
(actuator with holder for different caps)



 PCB terminal horizontal
(shortened actuator)



 PCB terminal horizontal
1681.9408
normally closed contact SPNC
(actuator with holder for different caps)

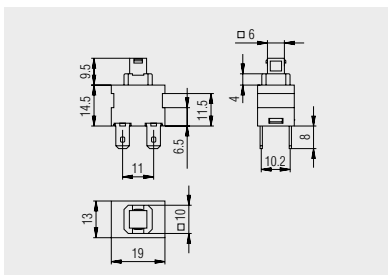


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

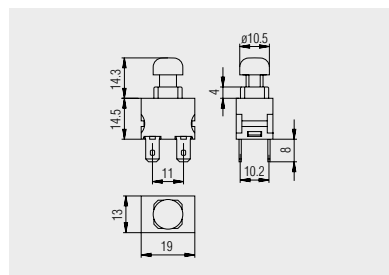
T0 16 (4) A / 12 (12) A 250 V AC



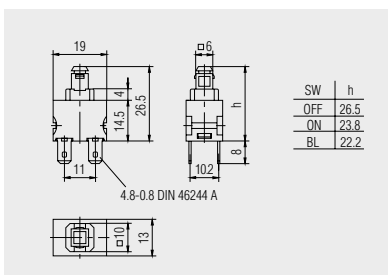
Basic types 1682 and 1689
double-pole



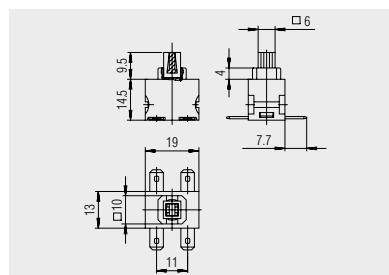
Quick-connect terminal 4.8 x 0.8
vertical (shortened actuator)



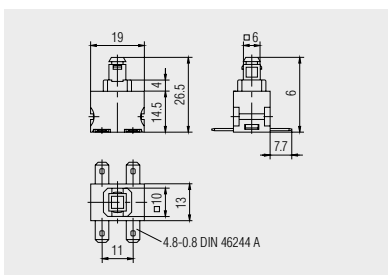
Quick-connect terminal 4.8 x 0.8
vertical (with mounted cap)



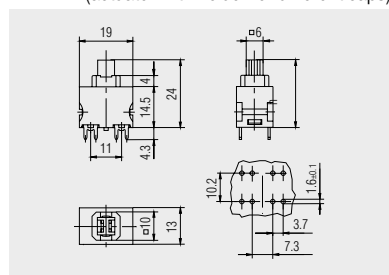
Quick-connect terminal 4.8 x 0.8
vertical (standard actuator)



Quick-connect terminal 4.8 x 0.8
horizontal
(actuator with holder for different caps)



Quick-connect terminal 4.8 x 0.8
horizontal (standard actuator)



PCB terminal vertical
(actuator with holder for different caps)

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 'N' DRIVE

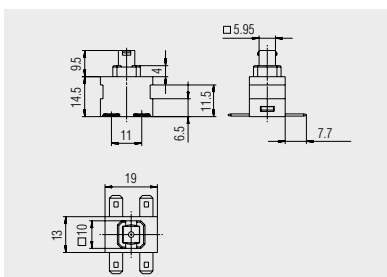


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

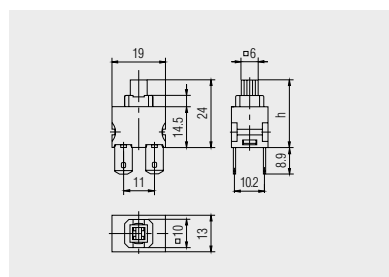
TO 16 (4) A / 12 (12) A 250 V AC



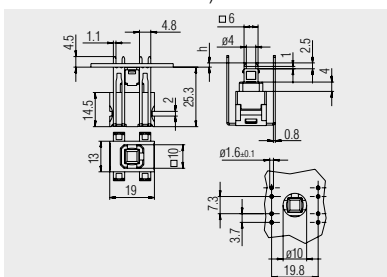
Basic types 1682 and 1689
double-pole



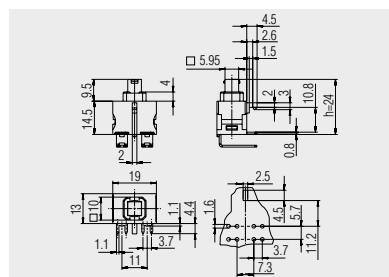
Quick-connect terminal 4.8 x 0.8
horizontal (shortened actuator
without cut-out)



Quick-connect terminal 6.3 vertical
(actuator with holder for different caps)



PCB terminal 180° angled
(shortened actuator)



PCB terminal horizontal (shortened
actuator without cut-out)

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

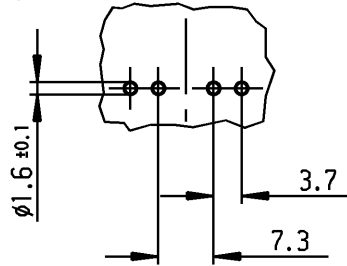
SENSORS

ECO

PUSH'N'DRIVE

recommended terminal layout; side of component
tolerances as per DIN IEC 326 item 3 very fine

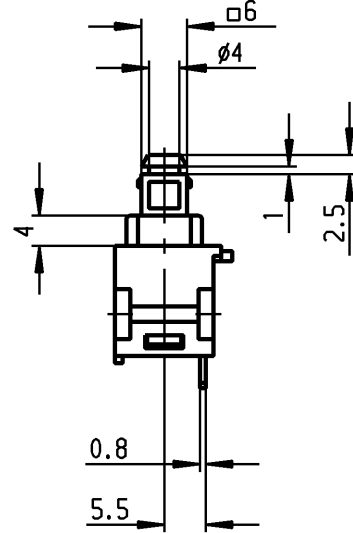
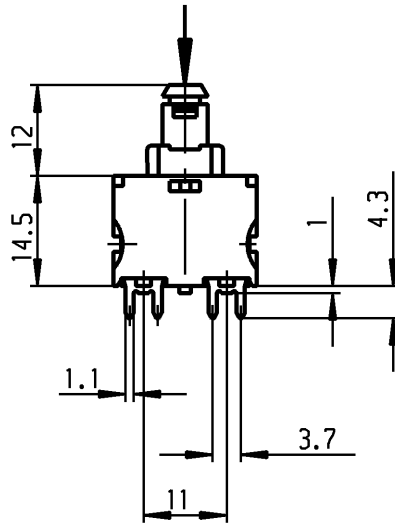
Empfohlenes Lochbild; Bauteileseite
Toleranzen nach DIN IEC 326 sehr fein



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operating force
Betätigungskraft $F=7N \pm 2.5N$



Aufschrift
Marking



168..

12(12)/250 ~ 5E4 T100/55



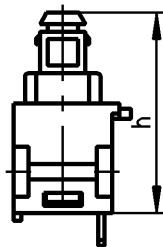
12A 125 - 250 VAC
1/2 HP 125-250 VAC

R 97 

Herstelljahr/-woche
nach DIN EN 60062

date code of manufacture:
year / week
acc. to DIN EN 60062

Auf Verpackung/on box: G



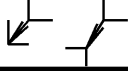
operating position	Schaltstellung	h
OFF	AUS	26.5
ON	EIN	23.8
block	Block	22.2

Ausschalter 1-polig
Fuer Gerate der Klasse II geeignet

SPST
suitable for appliances of class II

G=Konform nach IEC 60335-1:2001 Kap.30
G=matching IEC 60335-1:2001 clause 30

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Für Form und Lage FOR SHAPE AND LOC.			Allgemeintoleranzen UNTOLERANCED DIMENSIONS					Pause COPY	Blatt SHEET		Typ K	Zeichn./DRAWING NO. 1681.2102	Index
			PROJECTION 	Abmasse und Nennmassbereiche Angaben in mm ALL DIMENSIONS ARE IN MILLIMETRES		Laengen LENGTH	Radien RADII		Original DIN A4	Maßstab SCALE 1:1			
0-6	± 0.2	±											
>6-15	± 0.4	±											
>15-30	± 0.4	±											
>30-70	±	±											
>70-120	±												
>120-200	±												
Für Winkel FOR ANGLE ± 2°								0 10 20 30 mm		Appliance Switch Geraeteschalter MARQUARDT Marquardt GmbH, D-78604 Rietheim-Weilheim			
c			g			CAD Medusa		Z					
b			f			gez./DRAWN BY 15.08.05 hhe							
a	47885	11.07.06 hhe	e			gepr./CHECKED BY mej							
	44406	15.08.05 hhe	d			Ersatz für/REPLACEMENT OF							
Ausg. ISSUE	Änderung REVISION	gez. DRAWN BY	Ausg. ISSUE	Änderung REVISION	gez. DRAWN BY								

MARQUARDT
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