

➔ 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	



SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

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



SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

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

 double-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 (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				

ROCKERSWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SWAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

ECO

PUSH'N'DRIVE

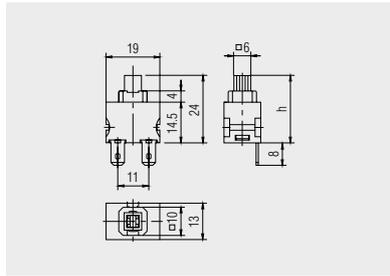


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

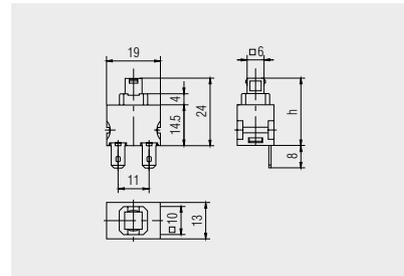
TO 16 (4) A / 12 (12) A 250 V AC



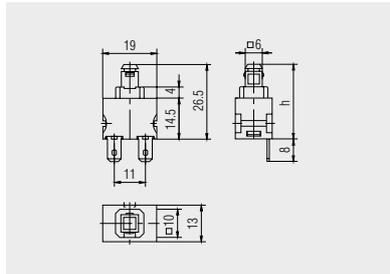
Basic type 1681
single-pole



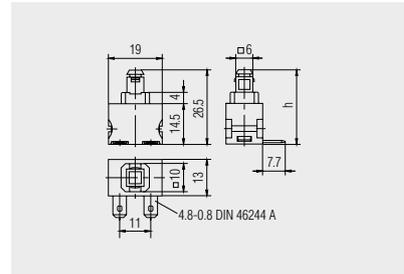
Quick-connect terminal 4.8 x 0.8
vertical
(actuator with holder for different caps)



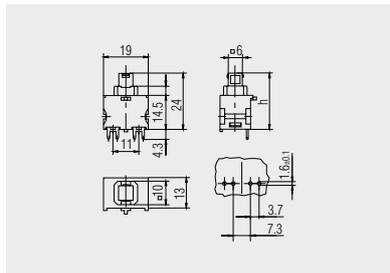
Quick-connect terminal 4.8 x 0.8
vertical (shortened actuator)



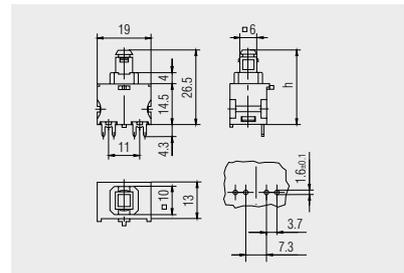
Quick-connect terminal 4.8 x 0.8
vertical (standard actuator)



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



PCB terminal vertical



PCB terminal vertical
(standard actuator)

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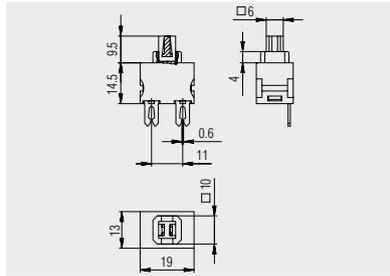


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

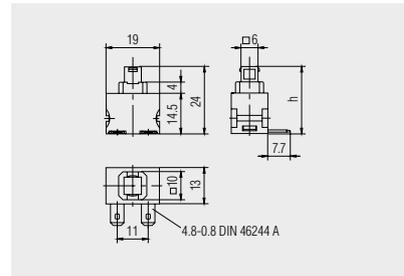
TO 16 (4) A / 12 (12) A 250 V AC



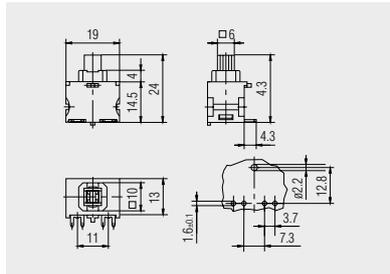
Basic type 1681
single-pole



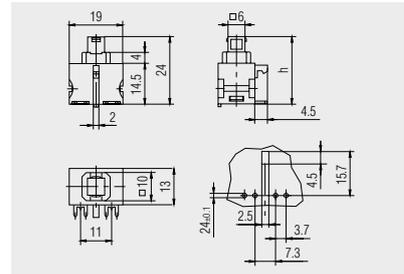
Cut terminal
(actuator with holder for different caps)



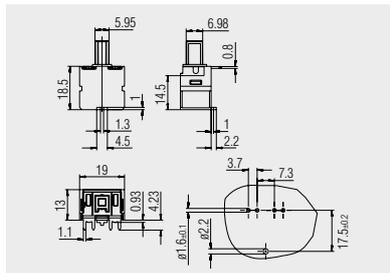
Quick-connect terminal 4.8 x 0.8
horizontal (shortened actuator)



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)

ROCKERSWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SWAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

ECO

PUSH'N'DRIVE

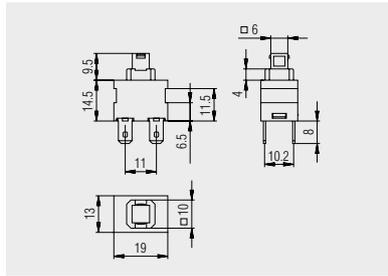


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

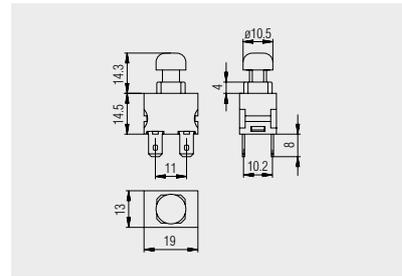
TO 16 (4) A / 12 (12) A 250 V AC



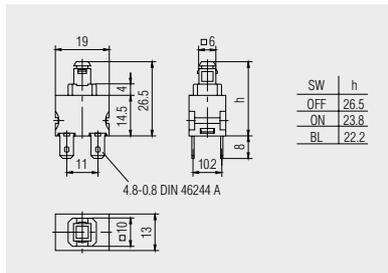
Basic types 1682 and 1689 double-pole



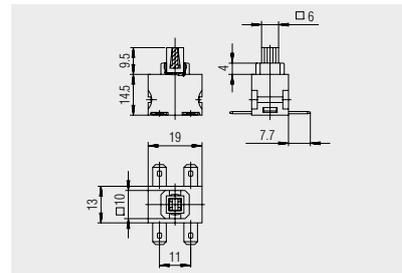
Quick-connect terminal 4.8 x 0.8 vertical (shortened actuator)



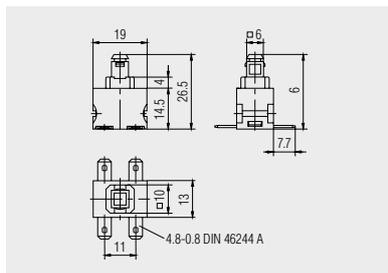
Quick-connect terminal 4.8 x 0.8 vertical (with mounted cap)



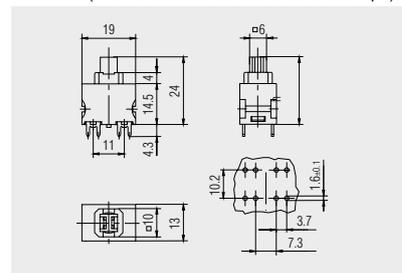
Quick-connect terminal 4.8 x 0.8 vertical (standard actuator)



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)

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TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

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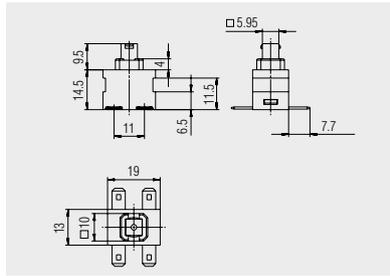


SERIES 1680 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

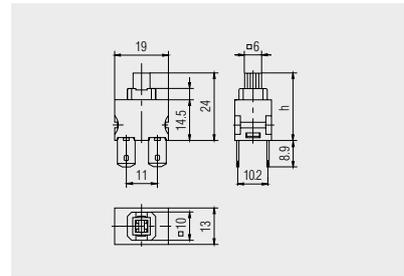
TO 16 (4) A / 12 (12) A 250 V AC



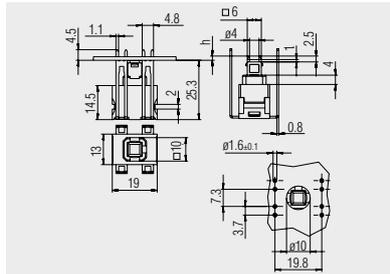
Basic types 1682 and 1689 double-pole



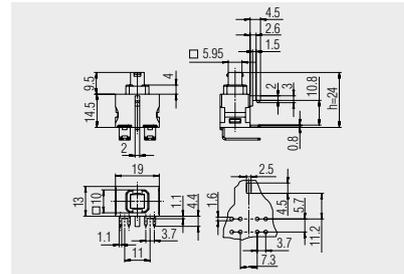
Quick-connect terminal 4.8 x 0.8 horizontal (shortened actuator without cut-out)



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)

ROCKERSWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

TACT AND KEY SWITCHES

SWAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

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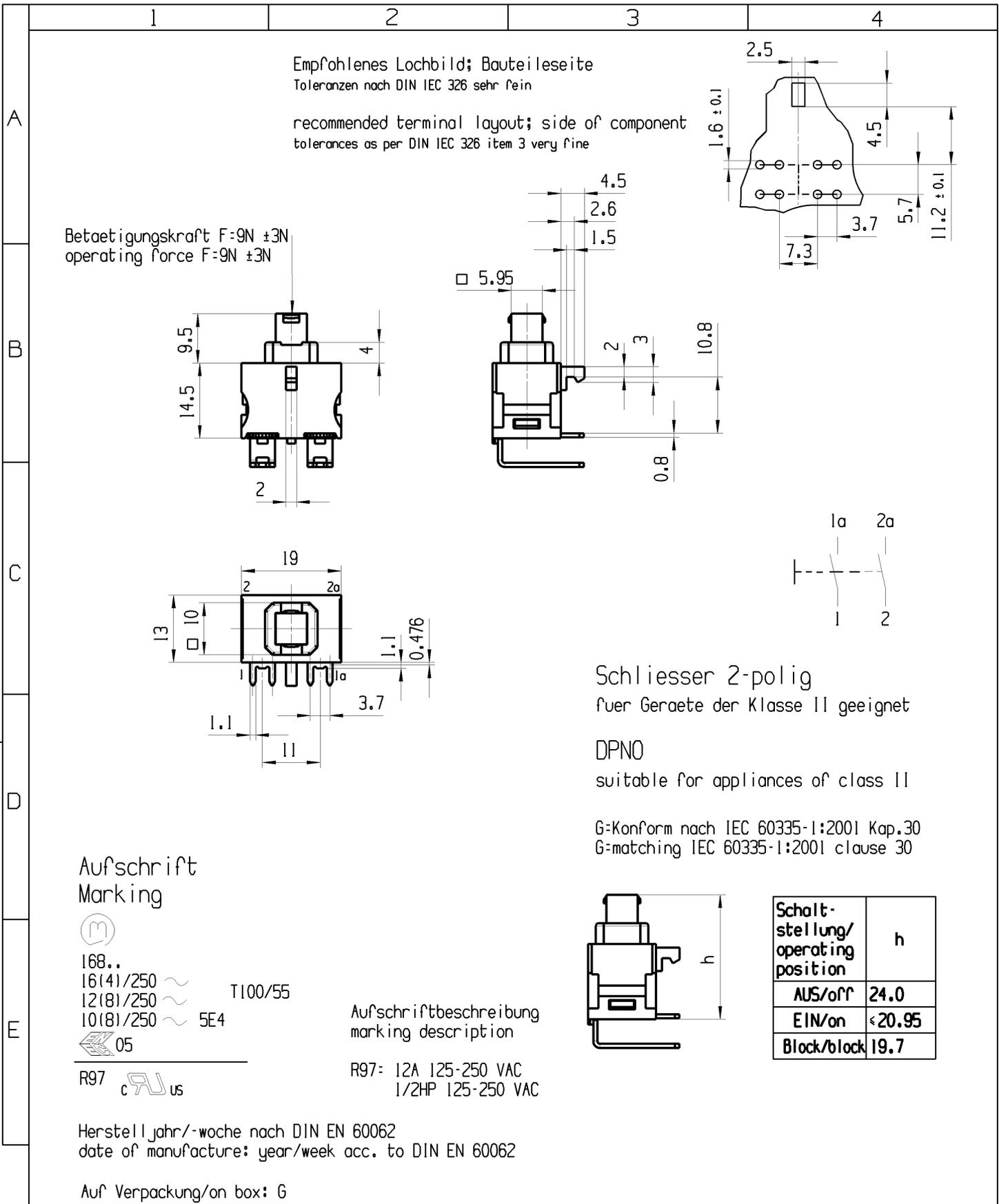
PUSH'N'DRIVE

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Aufschrift
Marking

168..
 16(41)/250 ~ T100/55
 12(81)/250 ~
 10(81)/250 ~ 5E4
 05

Aufschriftbeschreibung
 marking description
 R97- 12A 125-250 VAC
 1/2HP 125-250 VAC

Herstelljahr/-woche nach DIN EN 60062
 date of manufacture: year/week acc. to DIN EN 60062

Auf Verpackung/on box: G

Schaltstellung/ operating position	h
AUS/off	24.0
EIN/on	≤20.95
Block/block	19.7

fuer Form und Lage FOR SHAPE AND LOC.	☉ =	Allgemeintoleranzen UNTOLERANCED DIMENSIONS				Pause COPY	Blatt SHEET 01	TYP	Zeichn./DRAWING NO. 16894202	Index d
	fuer Winkel FOR ANGLE ± 2		PROJEKTION	Abmasse und Nennmassbereiche Angaben in mm	Laenge LENGTH					
			0-6 ± 0.2 ± 0.2	>6-15 ± 0.4 ± 0.4	>15-30 ± 0.4 ± 0.4					
			ALL DIMENSIONS ARE IN MILLIMETRES	>30-70 ±	>70-120 ±					
				>120-200 ±	± 10%					
c	47886	06/23/06	MUT							
b	45335	03/03/06	MUT							
a	44906	10/19/05	MUT							
	43782	08/04/05	WJ	d	67224	02/25/10	YUK			
Ausg. ISSUE	Aenderung REVISION	gez. DRAWN BY		Ausg. ISSUE	Aenderung REVISION	gez. DRAWN BY				
							CAD: UG_NX6			
							gez./DRAWN BY 07/27/05 MUT			
							gepr./CHECKED BY			
							Ersatz fuer/REPLACEMENT OF V04196002			

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