



SERIES 1683 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

TO 16 A 250 V AC



PRODUCT FEATURES

- Million times proven, double lifting contact system
- High electrical rating up to 16 A
- High rating with 100 000 mechanical switching cycles
- Illuminated and non-illuminated variants

ON REQUEST

- Other colors
- Printing
- Other lamp variants
- Snap-on customized actuators
- Other terminal variants (e.g. 6.3 x 0.8 mm)
- Cable assembly
- Variant with dust and water protection

Mechanical life endurance	10E4
Operating force	approx. 8 N (basic type 1683) approx. 12 N
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	terminal side -20 °C ... +100 °C actuating side -20 °C ... +55 °C
Flammability	UL 94 (actuator: V-0, socket: V-1, housing: V-2) UL 94 V-0
Glow wire test temperature	850 °C
Actuator	IP 40 IP 65 and IP 67 (product- dependent)
Material actuator housing	PC / EPDM / PA Latamid PA / PA glass fiber-reinforced / PA C3U / PA Latamid glass fiber-reinforced
Plug force of the terminals	≤ 80 N
Approval marks	 /  / 
Suitable for appliances of protection class II	

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 1683 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

TO 16 A 250 V AC

 single-pole	Lighting voltage (V)	Actuator color / printing	16 (4) A 250 V AC 1E4	12 (8) A 250 V AC 1E4	10 (8) A 250 V AC 5E4	12 A 125 - 250 V AC 1/2 HP	Terminal type	Terminal description	Contact distance (mm)	Contact material	Free position (FP) max. (mm)	Operating position (OP) (mm)	Permissible total travel position (TP) (mm)	Actuator	Miscellaneous	Stock version
ON / OFF switch (SPST)																
1686.1101	230		☐	☐	☐	☐		4.8	≥ 3	Ag	23.9	20.85	19.7	IP 40		
1686.8104	230		☐	☐	☐	☐		4.8	≥ 3	Ag	28	25	23.8	IP 65 and IP 67		
1683.1101			☐	☐	☐	☐		4.8	≥ 3	Ag	23.9	20.85	19.7	IP 40		
1683.8101			☐	☐	☐	☐		4.8	≥ 3	Ag	28	25	23.8	IP 65 and IP 67		
Normally open contact (SPNO)																
1686.6155	24		☐	☐	☐	☐		4.8 / 2 x 2.8	≥ 3	Au	23.9	20.85	19.7	IP 40	lamp terminal (2.8) external	
1683.1201			☐	☐	☐	☐		4.8	≥ 3	Ag	23.9	20.85	19.7	IP 40		☐
1683.1802			☐	☐	☐	☐		4.8	≥ 3	Ag	23.5	20.45	19.3	IP 40		

 double-pole	Lighting voltage (V)	Actuator color / printing	16 (4) A 250 V AC 1E4	12 (8) A 250 V AC 1E4	10 (8) A 250 V AC 5E4	12 A 125 - 250 V AC 1/2 HP	Terminal type	Terminal description	Contact distance (mm)	Contact material	Free position (FP) max. (mm)	Operating position (OP) (mm)	Permissible total travel position (TP) (mm)	Actuator	Miscellaneous	Stock version
ON / OFF switch (DPST)																
1687.1104	230		☐	☐	☐	☐		4.8	≥ 3	Ag	23.9	20.85	19.7	IP 40		☐
1684.1101			☐	☐	☐	☐		4.8	≥ 3	Ag	23.9	20.85	19.7	IP 40		
1684.1701			☐	☐	☐	☐		4.8	≥ 3	Ag	23.5	20.45	19.3	IP 40	snap-on actuator	
1684.1801			☐	☐	☐	☐		4.8	≥ 3	Ag	23.5	20.45	19.3	IP 40		
Normally open contact (SPNO)																
1684.8202			☐	☐	☐	☐		4.8	≥ 3	Ag	28	25	23.8	IP 65 and IP 67		

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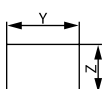


SERIES 1683 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

TO 16 A 250 V AC

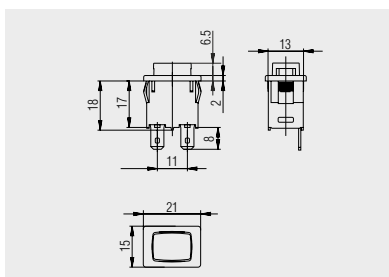


Basic type 1683
single-pole
non-illuminated

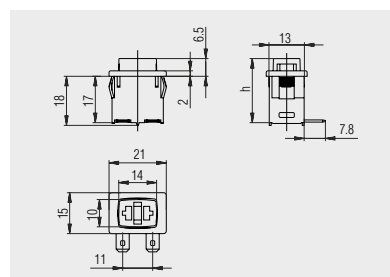


X = Wall thickness

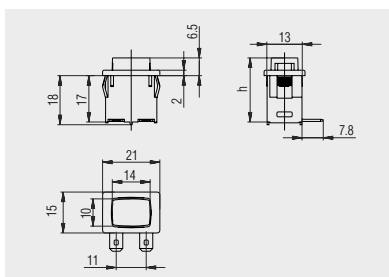
x	y	z
0.75 ... 1.25	19.2 ^{-0.1}	12.9 ^{+0.1}
1.25 ... 2	19.4 ^{-0.1}	12.9 ^{+0.1}
2 ... 3	19.8 ^{-0.1}	12.9 ^{+0.1}



Quick-connect terminal 4.8 x 0.8



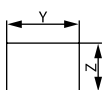
Quick-connect terminal 4.8 x 0.8
horizontal



Quick-connect terminal 4.8 x 0.8
horizontal

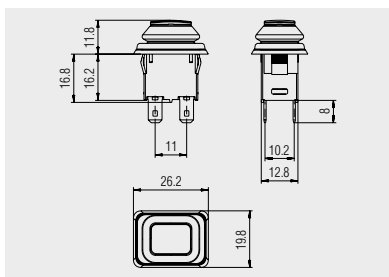


Basic types 1683, 1684,
1686 and 1687
single and double-pole
illuminated / non-illuminated



X = Wall thickness

x	y	z
1.0 ... 2.0	19.8 ^{-0.1}	12.9 ^{+0.1}



Quick-connect terminal 4.8 x 0.8
1686.8101 and 1683.8104 with
bellows for IP 65/IP 67

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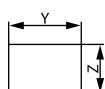


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TO 16 A 250 V AC

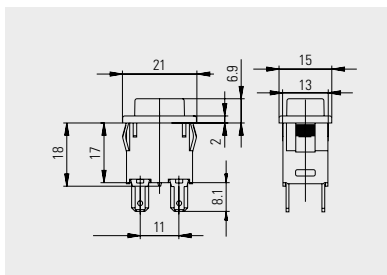


Basic types 1683, 1684,
1686 and 1687
single and double-pole
illuminated / non-illuminated

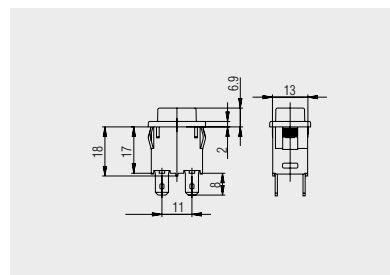


X = Wall thickness

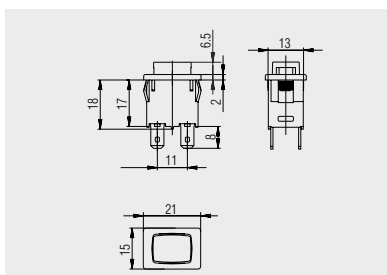
x	y	z
0.75 ... 1.25	19.2 ^{-0.1}	12.9 ^{+0.1}
1.25 ... 2	19.4 ^{-0.1}	12.9 ^{+0.1}
2 ... 3	19.8 ^{-0.1}	12.9 ^{+0.1}



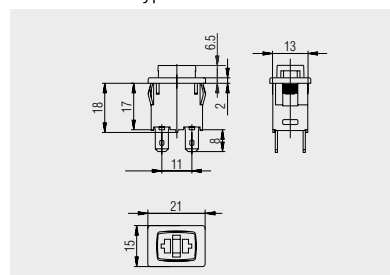
Quick-connect terminal 4.8 x 0.8
/ 2 x 2.8 x 0.8 with external lamp
1686.6155



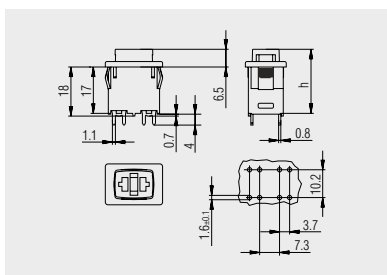
Quick-connect terminal 4.8 x 0.8
1684.1101, 1684.1104, 1684.1201,
basic types 1687 and 1686



Quick-connect terminal 4.8 x 0.8
basic type 1684



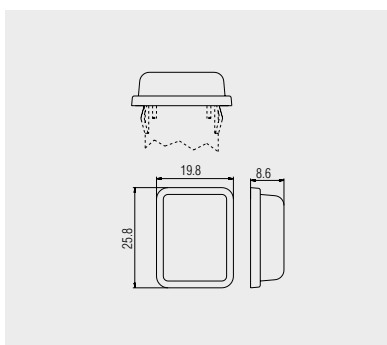
Quick-connect terminal 4.8 x 0.8
basic type 1684



PCB terminal vertical
1684.2701



Protection cap
203.701.011



Transparent PVC-protection cap for
dust and water protection from the
actuation side

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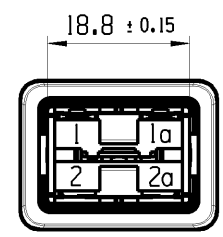
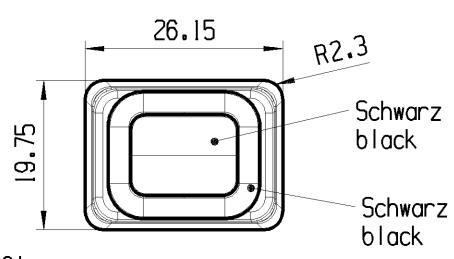
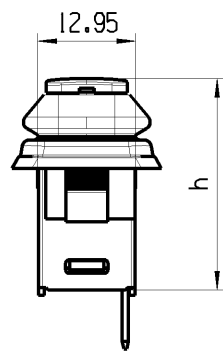
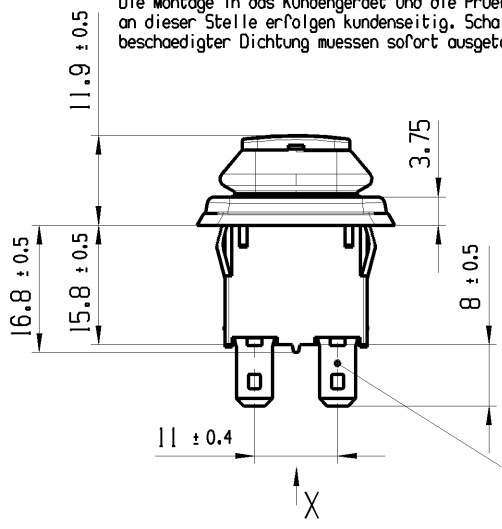
VERTRAULICH

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1	2	3	4
Empfohlener Ausschnitt fuer Rastbefestigung (Grat gegenueber Bestueckungsseite) recommended cut-out for snap-in fixing (ledge opposite to snap-in direction)	Wanddicke wall thickness	Ausschnittlaenge length of cut-out	Ausschnittbreite width of cut-out
	1 to / bis 2	19.8 ^{+0.1} _{-0.1}	12.9 ^{+0.1} _{-0.1}

Die in unseren Unterlagen angegebene IP Schutzklasse bezieht sich auf die Betaetigungsseite des Schalters, wenn dieser in das Kundengerat eingebaut ist. Die Abdichtung zwischen Schalter und Kundengerat kann ueber die umlaufende Dichtlippe der Dichtung erfolgen. Die Montage in das Kundengerat und die Pruefung auf Dichtheit an dieser Stelle erfolgen kundenseitig. Schalter mit beschaedigter Dichtung muessen sofort ausgetauscht werden.

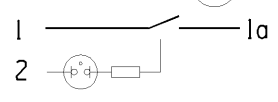
The IP-protection class mentioned in our documents refers to the actuating side of the switch when mounted into the customer appliance. The sealing between switch and customer appliance is realizable through the surrounding sealing lip of the seal. The mounting into the customer appliance and the testing of the tightness have to be effected by the customer. Switches with damaged seal have to be replaced immediately.



Aufschrift
marking

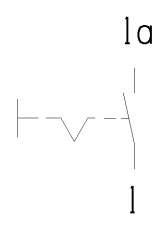
168..
16(4)/250 ~
12(8)/250 ~
10(8)/250 ~ 5E4
T100/55 05

12A 125-250V AC
1/2 HP 125-250V AC
R97



Herstellort /-jahr /-woche
nach DIN EN 60062
code of manufacture:
place / year / week
acc. to DIN EN 60062

Schalt- stellung	operating position	h
AUS	OFF	28
EIN	ON	25
Block	block	23.8



Ausschalter 1-Polig
Fuer Gerate der Klasse II geeignet
IP65, IP67 (vertiefter Einbau empfohlen)
SPST
suitable for appliances of Class II
IP65, IP67 (deepened mounting advised)

fuer Form und Lage FOR SHAPE AND LOC.	☉ =		Allgemeintoleranzen UNTOLERANCED DIMENSIONS					Pause COPY	Blatt SHEET 01	TYP K	Zeichn./DRAWING NO. 16838101	Index
			PROJEKTION	Abmasse und Nennmassbereiche Angaben in mm		Laenge LENGTH	Radien RADI					
fuer Winkel FOR ANGLE ± 2			ALL DIMENSIONS ARE IN MILLIMETRES	0-6	± 0.15	± 0.2	Original Din A4	Masstab SCALE 1 : 1 30mm				
				>6-15	± 0.2	± 0.3						
				>15-30	± 0.25	± 0.5						
				>30-70	± 0.4							
				>70-120	± 0.6	± 10%						
			>120-200	± 1								
											GERAETESCHALTER	
											appliance switch	
												MARQUARDT
												</