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 connection variants (e.g. 6.3 x 0.8 mm)
- Cable assembly
- Variant with dust and water protection

Mechanical life endurance		10E4
Operating force		ca. 12 N ca. 8 N (basic type 1683)
Contact resistance (new condition)		< 100 mOhm (1 A 12 V DC)
Insulation resistance (new condition)		> 100 MOhm (500 V DC)
Voltage strength at 250 V		1 500 V function insulation / basic insulation 3 000 V reinforced insulation 500 V small contact distance
Proof tracking		250 PTI
Insulation spacing		acc. to EN 61058 for reinforced or double insulation
Ambient temperature		connection side -20 °C ... +100 °C actuating side -20 °C ... +55 °C
Flammability		UL 94 (actuator: V-0, socket: V-1, housing: V-2)
Heat and fire resistance		850 °C (category D)
Material	actuator housing connections	PC PA / PA glass fiber-reinforced silver-plated
Plug force of the terminals		≤ 80 N
Approval marks		/ /
Suitable for appliances of protection class II		







SERIES 1683 - SINGLE AND DOUBLE-POLE PUSHBUTTON SWITCHES

TO 16 A 250 V AC



single-pole	Voltage lamp in 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	Connection type	Connection description	Contact distance mm	Contact material	Free position (FP) max. in mm	Operating position (OP) in mm	Permissible total travel position (TP) in mm	Miscellaneous	Actuator description	Stock version
ON/OFF switch (SPST)																
1686.1101	230		●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			●
1686.1304	230		●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			
1683.1101			●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			
1683.1701			●	●	●	●		4.8	≥ 3	Ag	23.5	20.45	19.3	snap-on actuator		
1683.1801			●	●	●	●		4.8	≥ 3	Ag	23.5	20.45	19.3			
1683.3101			●	●	●	●		4.8 horizontal	≥ 3	Ag	23.5	20.45	19.3			
Normally open contact (SPNO)																
1683.1201			●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			●
1683.1802			●	●	●	●		4.8	≥ 3	Ag	23.5	20.45	19.3			
1683.3601			●	●	●	●		4.8 horizontal	≥ 3	Ag	23.5	20.45	19.3	snap-on actuator		



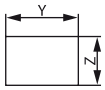
double-pole	Voltage lamp in V	Actuator color / printing	16 (4) A 250 V AC 1E4	12 (8) A 250 V AC 1E4	10 (8) A 250 V AC 5E4	12 A 125 - 250 V AC 1/2 HP	Connection type	Connection description	Contact distance mm	Contact material	Free position (FP) max. in mm	Operating position (OP) in mm	Permissible total travel position (TP) in mm	Miscellaneous	Actuator description	Stock version
ON/OFF switch (DPST)																
1687.1104	230		●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			●
1684.1101			●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			●
1684.1104			●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			
1684.1701			●	●	●	●		4.8	≥ 3	Ag	23.5	20.45	19.3	snap-on actuator		
1684.1801			●	●	●	●		4.8	≥ 3	Ag	23.5	20.45	19.3			
1684.2701			●	●	●	●		vertical	≥ 3	Ag	23.5	20.45	19.3	snap-on actuator		
Normally open contact (DPNO)																
1684.1201			●	●	●	●		4.8	≥ 3	Ag	23.9	20.85	19.7			●
1684.1802			●	●	●	●		4.8	≥ 3	Ag	23.5	≤ 20.45	19.3			

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TO 16 A 250 V AC

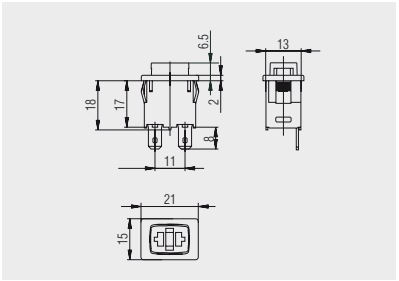


Basic type 1683
single-pole
non-illuminated

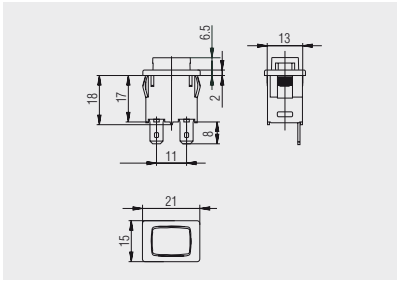


X = Wall thickness

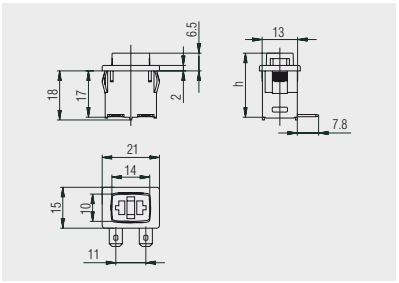
X	Y	Z
0.75 ... 1.25	19.2 $^{-0.1}$	12.9 $^{+0.1}$
1.25 ... 2	19.4 $^{-0.1}$	12.9 $^{+0.1}$
2 ... 3	19.8 $^{-0.1}$	12.9 $^{+0.1}$



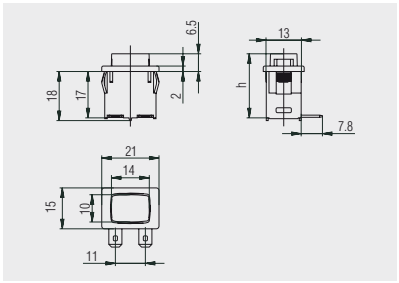
Quick-connect terminal 4.8



Quick-connect terminal 4.8



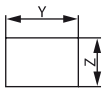
Quick-connect terminal 4.8
horizontal



Quick-connect terminal 4.8
horizontal

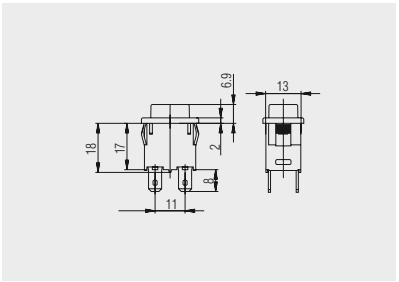


Basic types 1684,1686 and 1687
single and double-pole
illuminated / non-illuminated

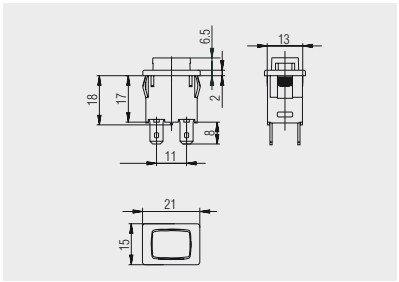


X = Wall thickness

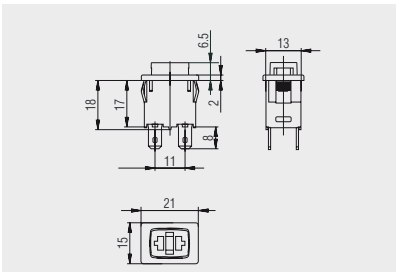
X	Y	Z
0.75 ... 1.25	19.2 $^{-0.1}$	12.9 $^{+0.1}$
1.25 ... 2	19.4 $^{-0.1}$	12.9 $^{+0.1}$
2 ... 3	19.8 $^{-0.1}$	12.9 $^{+0.1}$



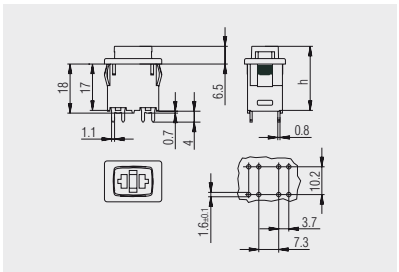
Quick-connect terminal 4.8
1684.1101, 1684.1104, 1684.1201,
basic types 1687 and 1686



Quick-connect terminal 4.8
basic type 1684



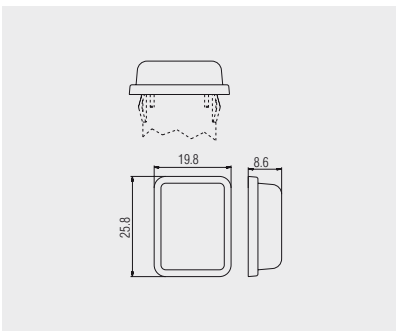
Quick-connect terminal 4.8
basic type 1684



PCB terminal vertical
1684.2701



Protection cap
203.701.011



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

APPROVAL MARKS

	ENEC 05 (KEMA)		UL (USA)
	ENEC 10 (VDE)		UL (USA + Canada)
	VDE		CSA (Canada)
			CSA (Canada + USA)

TERMINAL SYMBOLS

	Quick-connect terminal		Cable
	Solder terminal		Terminal strip
	Short solder terminal		Push-in terminal
	PCB terminal		Snap-in terminal
	PCB terminal angled to left		Cut terminal
	PCB terminal angled to right		Screw terminal
	Socket terminal		

ACTUATOR SYMBOLS

	Straight lever		Lever simulated roller with adjusting screw
	Lever simulated roller		Lever with adjusting screw and roller
	Lever with roller		Lever with cams
	Differential lever		Housing cams
	Spring lever		Pushbutton
	Spring lever bent		Rotary shaft
	Spring lever with molded spring cam		Standard actuator
	Lever with adjusting screw		Mushroom-shaped actuator

ABBREVIATIONS TECHNICAL DRAWINGS

ad	Adjustable	**OP**	Operating position
AN	Anode	**OP NC**	Operating position normally closed contact
BL	Block	**OP NO**	Operating position normally open contact
FH	Fixing hole, locating hole fixing pin	**OR**	On request
FI	Fields for function indicator	**RC**	Recommended cut-out
FP	Free position	**RL**	Reference level
FX	Fixing pin	**SH**	Snap-in hole
ju	Adjusted	**SL**	Symbol limit
MC	Marking cathode	**SP**	Solder pads
MF	Mounting frame	**ST**	Slide travel
MP	Measuring point	**SW**	Switching position
OFF	Off	**TH**	Terminal hole
off-range	Zero position	**tk**	Thick
OG	Operating range	**to**	Top
ON	On	**TP**	Total travel position

SWITCHING FREQUENCY (ABBREVIATIONS)

e.g. 5E4 switching cycles ≙ **50 000** switching cycles