



HESTORE.HU

elektronikai alkatrész áruház

EN: This Datasheet is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

TO 20 (4) A 250 V AC







PRODUCT FEATURES

- ◆ 100 million times proven switching principle
- ◆ mechanical life endurance up to 1 million switching cycles
- ◆ Wide variety
- ◆ Variants with IP 67 or dust protection insert
- ◆ Two housing variants
- ◆ Actuating characteristic
- ◆ Illuminated and non-illuminated variants
- ◆ Approval for 400 V (product-dependent)

ON REQUEST

- ◆ Other colors
- ◆ Other rocker printings
- ◆ Other printing variants
- ◆ Snap-on customized actuators
- ◆ Cable assembly

Mechanical life endurance	10E4 5E4 (basic type 1839) 1E6 (product-dependent)
Inrush current (capacitive)	120 A / 50 A (contact pair Ag / Cu and basic type 1834)
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 / IP 67 (product-dependent)
Ambient temperature	terminal side -20 °C ... +105 °C / ... +85 °C / ... +100 °C actuating side -20 °C ... +55 °C
Flammability	UL 94 V-2 UL 94 V-0
Glow wire test temperature	850 °C
Material	actuator PA / PC housing PA terminals silver plated / tinned
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

FACT AND KEY SWITCHES

































SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

TO 20 (4) A 250 V AC

	ON / OFF switch (SPST)						Normally open contact (SPNO)				Changeover switch (SPDT)							
	1831.3815	1831.3933	1831.8112	1832.3508	1831.3311	1831.1107	1831.1202	1831.3402	1831.8202	1831.1253	1833.3312	1833.1102	1833.3307	1833.7102				
Lighting voltage in V																		
Actuator color / printing																		
Housing color	black						black				black							
20 (4) A 250 V AC 1E4	•	•	•	•														
20 (4) A 250 V AC					•													
16 (4) A 250 V AC 1E4											•							
10 (8) A 400 V AC 5E4																		
10 (8) A 250 V AC 5E4	•	•	•	•	•													
10 (4) A 250 V AC 1E4						•						•	•	•				
10 A 12 V DC																		
6 (4) A 250 V AC 5E4						•						•	•	•				
6 (4) A 250 V AC 1E4																		
6 (4) A 250 V AC																		
4 (2) A 250 V AC 1E4							•	•	•									
30 mA 12 V DC										•								
16 A 250 V AC 1 HP	•	•	•	•	•													
16 A 125 V AC 1 HP																		
16 A 250 V AC 1/2 HP											•							
16 A 125 V AC 1/3 HP	•	•	•	•	•													
16 A 125 V AC 1/4 HP											•							
6 A 250 V AC 1/2 HP						•						•	•	•				
6 A 125 V AC 1/4 HP							•					•	•	•				
6 A 125 - 250 V AC 1/8 HP																		
6 A 125 V AC 1/10 HP								•	•	•								
4 A 250 V AC 1/10 HP							•	•	•									
Terminal type																		
Terminal description	6.3	6.3	6.3	6.3	6.3	4.8	4.8	6.3	6.3	4.8	6.3	4.8	6.3	4.8	6.3	4.8	6.3	
Contact distance in mm	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	≥ 3	
Contact material	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Ag	Au	Ag	Ag	Ag	Ag	Ag	Ag	Ag	
EN 60335 cap. 30 conform "G"					•								•					
Miscellaneous	1E6 mechanical life endurance IP 67		lower lying flange	two-pole size							lower lying flange					lower lying flange		
Stock version			•		•	•		•	•									

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

FACT AND KEY SWITCHES


SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

SENSORS

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

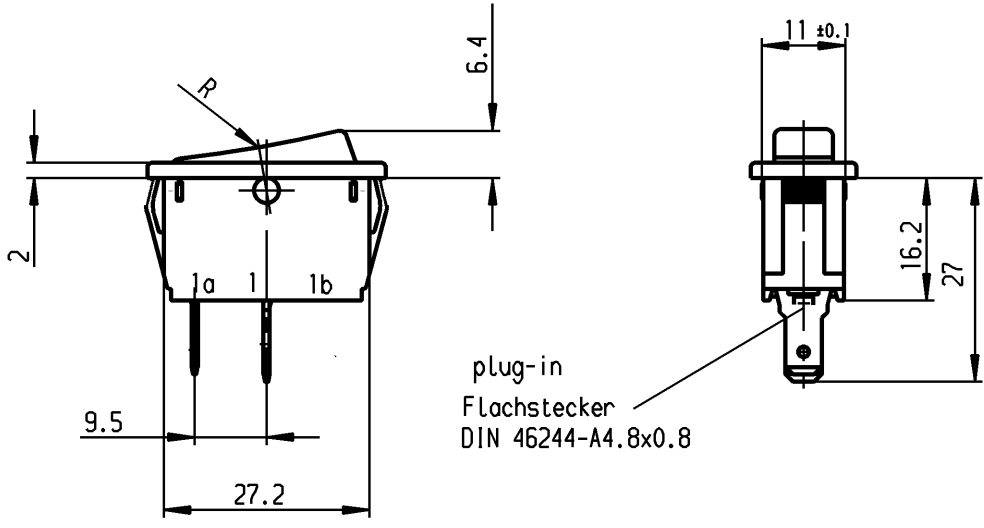
T0 20 (4) A 250 V AC

		SENSORS		MICRO-SIGNAL SWITCHES		SNAP-ACTION SWITCHES		TACT AND KEY SWITCHES		FOOT SWITCHES		ROTARY SWITCHES		SLIDE SWITCHES		TOGGLE SWITCHES		PUSHBUTTON SWITCHES		ROCKER SWITCHES		
single-pole																						
																						
Lighting voltage in V																						
Actuator color / printing																						
Housing color																						
20 (4) A 250 V AC 1E4																						
20 (4) A 250 V AC																						
16 (4) A 250 V AC 1E4																						
10 (8) A 400 V AC 5E4																						
10 (8) A 250 V AC 5E4																						
10 (4) A 250 V AC 1E4																						
10 A 12 VDC																						
6 (4) A 250 V AC 5E4																						
6 (4) A 250 V AC 1E4																						
6 (4) A 250 V AC																						
4 (2) A 250 V AC 1E4																						
30 mA 12 VDC																						
16 A 250 V AC 1 HP																						
16 A 125 V AC 1 HP																						
16 A 250 V AC 1/2 HP																						
16 A 125 V AC 1/3 HP																						
16 A 125 V AC 1/4 HP																						
16 A 250 V AC 1/2 HP																						
6 A 250 V AC 1/2 HP																						
6 A 125 V AC 1/4 HP																						
6 A 125 - 250 V AC 1/8 HP																						
6 A 125 V AC 1/10 HP																						
4 A 250 V AC 1/10 HP																						
Terminal type																						
Terminal description																						
Contact distance in mm																						
Contact material																						
EN 60335 cap. 30 conform "G"																						
Miscellaneous																						
Stock version																						
Changeover switch with OFF position in the center (SPDT - Center OFF)																						
	momentary function both sides	Ag	≥ 3																		1838.0305	
	1E6 mechanical life endurance IP 67	Ag	≥ 3	6.3																		1838.3901
●	momentary function both sides	Ag	≥ 3	4.8																		1838.1402
●		Ag	≥ 3	4.8																		1838.1502
		Ag	≥ 3	4.8																		1838.1509
●	momentary function one side	Ag	≥ 3	4.8																		1838.1602
	momentary function one side	Ag	≥ 3	2.8																		1838.4307
	momentary function both sides lower lying flange	Ag	≥ 3	6.3																		1838.8302
●	momentary function both sides	Ag	≥ 3	6.3																		1838.3402
		Ag	≥ 3	6.3																		1838.3502
Changeover switch (SPDT momentary)																						
		Ag	≥ 3	4.8																		1833.1202
		Ag	≥ 3	6.3																		1833.3402
	lower lying flange	Ag	≥ 3	4.8																		1833.6202

1	2	3	4
recommended cut-out for snap-in fixing (edge opposite to snap-in direction) Empfohlener Ausschnitt für Rastbefestigung (Grat gegenüber Bestückungsseite)	wall thickness Wanddicke	length of cut-out Ausschnittlänge	width of cut-out Ausschnittbreite
	0.75 to / bis 1.25	30 -0.1	11 +0.1
	1.25 to / bis 2	30.2 -0.1	11 +0.1
	2 to / bis 3	30.6 -0.1	11 +0.1

VERTRAULICH-CONFIDENTIAL
 © Alle Rechte bei Marquardt GmbH, auch fuer den Fall von Schutzrechtsmeldungen.
 Jede Verfuegungsbefugnis, wie Kopier- und Weitergaberecht, bei uns.
 © This document is the exclusive property of Marquardt GmbH. Without our consent, it may not be reproduced or given to third parties.

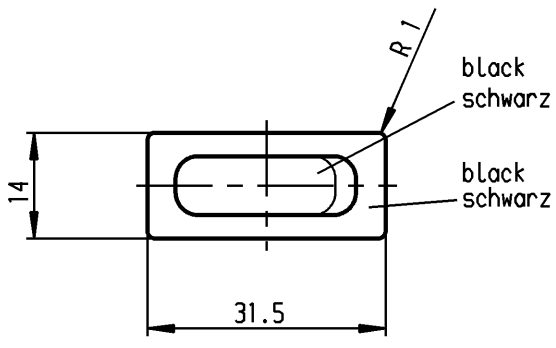
B



plug-in
Flachstecker
DIN 46244-A4.8x0.8

C

D



Marking
Aufschrift

Ⓜ
1831.
6(4)/250 ~ 5E4
10(4)/250 ~ T105/55

6A 125-250V AC
1/4HP125VAC
1/2HP250VAC
R30

SPST
suitable for appliances of class II































Ausschalter 1-polig
Für Geräte der Klasse II geeignet

Schutzvermerk nach DIN 34 beachten
COPYRIGHT RESERVED

Allgemeintoleranzen/UNTOLERANCED DIMENSIONS				PROJECTION		Pause COPY	Blatt SHEET		Zeichn./DRAWING NO. K 1831.1102
Für Längen und Radien FOR LENGTHS AND RADII.		Abmaße in mm für Nennmaßbereich in mm ALL DIMENSIONS ARE IN MILLIMETRES			Für Winkel FOR ANGLE		Original DIN A4	Maßstab SCALE 1:1	
±		bis/UP TO 6	über/OVER 6 bis/UP TO 30	über/OVER 30	± 2°		0 10 20 30 mm		
d				i			gez./DRAWN BY 23.01.96 grh		
c				h			gepr./CHECKED BY Kiz		
b	47099	10.04.06	hhe	g			Ersatz für/REPLACEMENT OF Zeichn. gl.Nr. vom 21.06.85		
a	23781	23.01.96	grh	f					
				e					
Ausg. ISSUE	Anderung REVISION	gez. DRAWN BY		Ausg. ISSUE	Anderung REVISION	gez. DRAWN BY	MARQUARDT Marquardt GmbH, D-78604 Rietheim-Weilheim		






















SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

T0 20 (4) A 250 V AC

		SENSORS		MICRO-SIGNAL SWITCHES		SNAP-ACTION SWITCHES		TACT AND KEY SWITCHES		FOOT SWITCHES		ROTARY SWITCHES		SLIDE SWITCHES		TOGGLE SWITCHES		PUSHBUTTON SWITCHES		ROCKER SWITCHES			
<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">double-pole</p>																							
Lighting voltage in V																							
Actuator color / printing																							
Housing color																							
20 (4) A 250 V AC 1E4																							
20 (4) A 250 V AC																							
16 (4) A 250 V AC 1E4																							
10 (8) A 400 V AC 5E4																							
10 (8) A 250 V AC 5E4																							
10 (4) A 250 V AC 1E4																							
10 A 12 VDC																							
6 (4) A 250 V AC 5E4																							
6 (4) A 250 V AC 1E4																							
6 (4) A 250 V AC																							
4 (2) A 250 V AC 1E4																							
30 mA 12 VDC																							
16 A 250 V AC 1 HP																							
16 A 125 V AC 1 HP																							
16 A 250 V AC 1/2 HP																							
16 A 125 V AC 1/3 HP																							
16 A 125 V AC 1/4 HP																							
6 A 250 V AC 1/2 HP																							
6 A 125 V AC 1/4 HP																							
6 A 125 - 250 V AC 1/8 HP																							
6 A 125 V AC 1/10 HP																							
4 A 250 V AC 1/10 HP																							
Terminal type																							
Terminal description																							
Contact distance in mm																							
Contact material																							
EN 60335 cap. 30 conform "G"																							
Miscellaneous																							
Stock version																							
ON / OFF switch (DPST)																							
●		Ag	≈ 3	6.3																		1832.3311	
●		Ag	≈ 3	6.3																			1832.3312
		●	Ag	≈ 3	6.3																		1832.3313
●	cover frame 33.2 long	Ag	≈ 3	6.3																			1832.3602
	lower lying flange	Ag	≈ 3	4.8																			1832.6112
	lower lying flange	Ag	≈ 3																				1832.7103
	lower lying flange	Ag	≈ 3	6.3																			1832.8112
	lower lying flange	Ag	≈ 3																				1832.9103
	dust protection inlay	Ag	≈ 3																				1832.0113
●		Ag	≈ 3	4.8																			1832.1102
●		Ag	≈ 3	6.3																			1832.3307
	lower lying flange	Ag	≈ 3																				1832.9101
Normally open contact (DPNO)																							
		Ag	≈ 3	6.3																			1832.3407
	lower lying flange	Ag	≈ 3	6.3																			1832.8204

















SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

T0 20 (4) A 250 V AC

SENSORS		MICRO-SIGNAL SWITCHES		SNAP-ACTION SWITCHES		TACT AND KEY SWITCHES		FOOT SWITCHES		ROTARY SWITCHES		SLIDE SWITCHES		TOGGLE SWITCHES		PUSHBUTTON SWITCHES		ROCKER SWITCHES					
<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">double-pole</p>																							
Lighting voltage in V																							
Actuator color / printing																							
Housing color																							
20 (4) A 250 V AC 1E4																							
20 (4) A 250 V AC																							
16 (4) A 250 V AC 1E4																							
10 (8) A 400 V AC 5E4																							
10 (8) A 250 V AC 5E4																							
10 (4) A 250 V AC 1E4																							
10 A 12 VDC																							
6 (4) A 250 V AC 5E4																							
6 (4) A 250 V AC 1E4																							
6 (4) A 250 V AC																							
4 (2) A 250 V AC 1E4																							
30 mA 12 VDC																							
16 A 250 V AC 1 HP																							
16 A 125 V AC 1 HP																							
16 A 250 V AC 1/2 HP																							
16 A 125 V AC 1/3 HP																							
16 A 125 V AC 1/4 HP																							
16 A 250 V AC 1/2 HP																							
6 A 250 V AC 1/2 HP																							
6 A 125 V AC 1/4 HP																							
6 A 125 - 250 V AC 1/8 HP																							
6 A 125 V AC 1/10 HP																							
4 A 250 V AC 1/10 HP																							
Terminal type																							
Terminal description																							
Contact distance in mm																							
Contact material																							
EN 60335 cap. 30 conform "G"																							
Miscellaneous																							
Stock version																							
Changeover switch with OFF position in the center (DPDT - Center OFF)																							
																					1839.1602		
	momentary function one side	Ag	≥ 3	4.8																		1839.2203	
	momentary function one side	Ag	≥ 3																				1839.3402
●	momentary function both sides	Ag	≥ 3	6.3																			1839.3502
		Ag	≥ 3	6.3																			1839.3503
	momentary function one side	Ag	≥ 3	6.3																			1839.3602
	dust protection inlay momentary function one side lower lying flange	Ag	≥ 3																				1839.7304
	cover frame 33.2 long momentary function both sides	Au	≥ 3	6.3																			1839.3352
	dust protection inlay	Ag	≥ 3																				1839.0105
Changeover switch (DPDT momentary)																							
		Ag	≥ 3	6.3																			1834.3402

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

TO 20 (4) A 250 V AC

Lamp	Lamp				
	1837.118	1837.2504	1837.3102	1837.8102	1837.8108
					
Lighting voltage in V	230	230	230	230	230
Actuator color / printing					
Housing color					
20 (4) A 250 V AC 1E4					
20 (4) A 250 V AC					
16 (4) A 250 V AC 1E4					
10 (8) A 400 V AC 5E4					
10 (8) A 250 V AC 5E4					
10 (4) A 250 V AC 1E4					
10 A 12 V DC					
6 (4) A 250 V AC 5E4					
6 (4) A 250 V AC 1E4					
6 (4) A 250 V AC					
4 (2) A 250 V AC 1E4					
30 mA 12 V DC					
16 A 250 V AC 1 HP					
16 A 125 V AC 1 HP					
16 A 250 V AC 1/2 HP					
16 A 125 V AC 1/3 HP					
16 A 125 V AC 1/4 HP					
6 A 250 V AC 1/2 HP					
6 A 125 V AC 1/4 HP					
6 A 125 - 250 V AC 1/8 HP					
6 A 125 V AC 1/10 HP					
4 A 250 V AC 1/10 HP					
Terminal type					
Terminal description	4.8		6.3	6.3	6.3
Contact distance in mm					
Contact material					
EN 60335 cap. 30 conform "G"					
Miscellaneous		lower lying flange		size basic type 1835	size basic type 1835
Stock version					

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

FACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

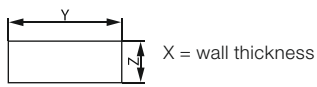
SENSORS

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

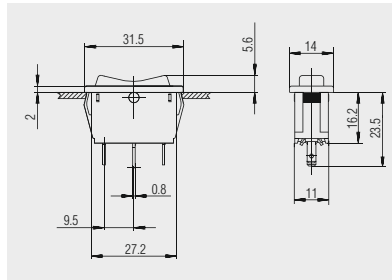
TO 20 (4) A 250 V AC



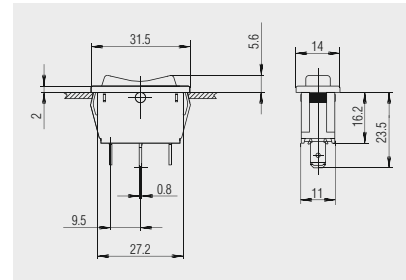
Basic types 1830, 1831, 1833 and 1838
single-pole
illuminated / non-illuminated



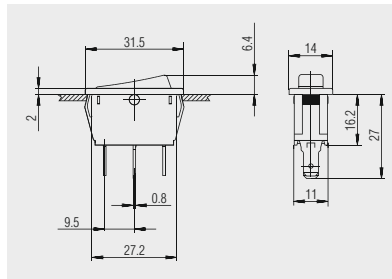
X	Y	Z
0.75 ... 1.25	30 ^{-0.1}	11 ^{+0.1}
1.25 ... 2	30.2 ^{-0.1}	11 ^{+0.1}
2 ... 3	30.6 ^{-0.1}	11 ^{+0.1}



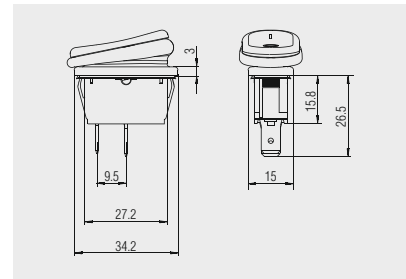
Quick-connect terminal 2.8 x 0.8
1838.4307



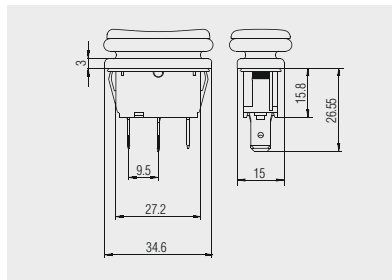
Quick-connect terminal 4.8 x 0.8
basic type 1838



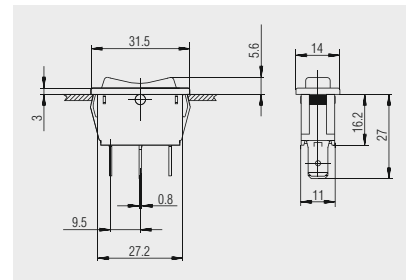
Quick-connect terminal 4.8 x 0.8
basic types 1830, 1831 and 1833



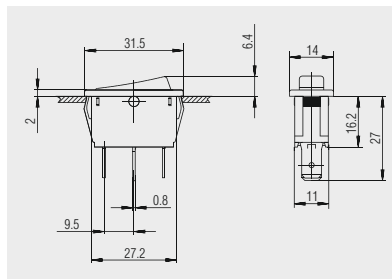
Quick-connect terminal 6.3 x 0.8
1831.3815



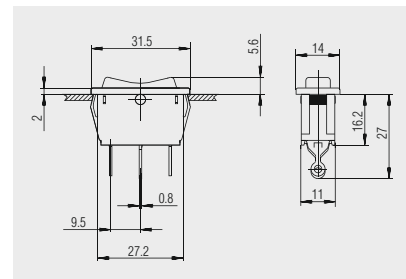
Quick-connect terminal 6.3 x 0.8
1838.3901



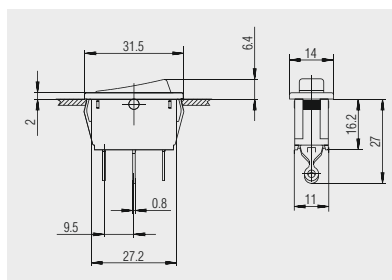
Quick-connect terminal 6.3 x 0.8
basic type 1838



Quick-connect terminal 6.3 x 0.8
basic types 1831 and 1833



Solder terminal
basic type 1838



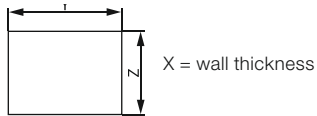
Solder terminal
basic types 1830 and 1831

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

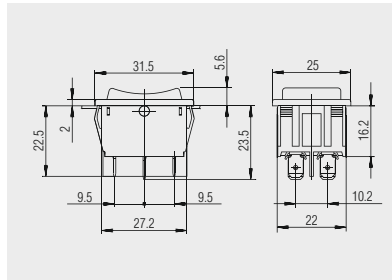
TO 20 (4) A 250 V AC



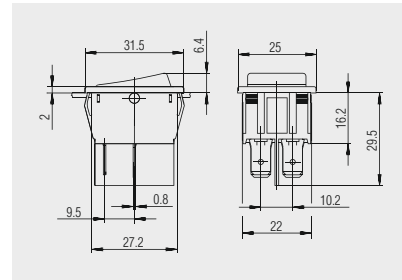
Basic types 1832, 1834, 1835 and 1839
double-pole
illuminated / non-illuminated



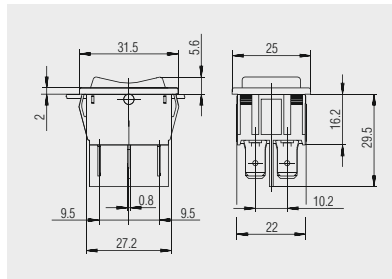
X	Y	Z
0.75 ... 1.25	30 ^{-0.1}	22 ^{+0.2}
1.25 ... 2	30.2 ^{-0.1}	22 ^{+0.2}
2 ... 3	30.6 ^{-0.1}	22 ^{+0.2}



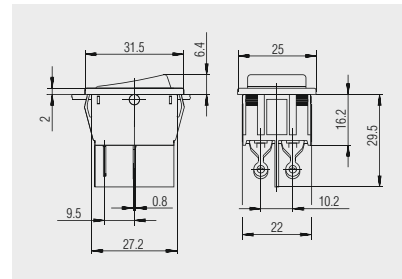
Quick-connect terminal 4.8 x 0.8



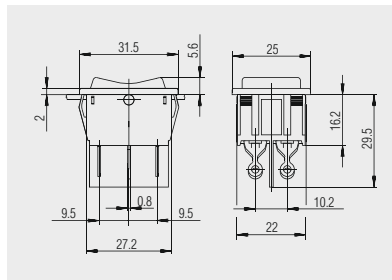
Quick-connect terminal 6.3 x 0.8 / 4.8
basic types 1832, 1834 and 1835



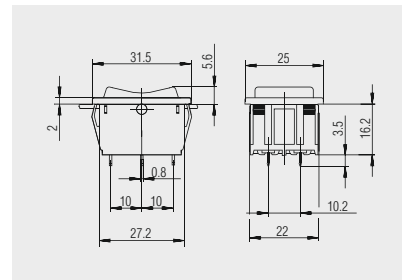
Quick-connect terminal 6.3 x 0.8
basic type 1839



Solder terminal
basic type 1832



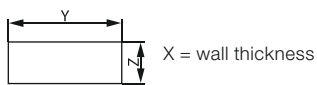
Solder terminal
basic type 1839



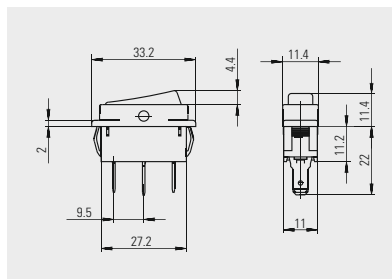
PCB terminal
basic type 1839



Basic types 1830, 1831 and 1833
single-pole, lower lying flange
illuminated / non-illuminated



X	Y	Z
0.75 ... 1.25	30 ^{-0.1}	11 ^{+0.1}
1.25 ... 2	30.2 ^{-0.1}	11 ^{+0.1}
2 ... 3	30.6 ^{-0.1}	11 ^{+0.1}



Quick-connect terminal 4.8 x 0.8
basic types 1830, 1831 and 1833

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES

FACT AND KEY SWITCHES

SNAP-ACTION SWITCHES

MICRO-SIGNAL SWITCHES

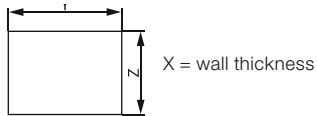
SENSORS

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

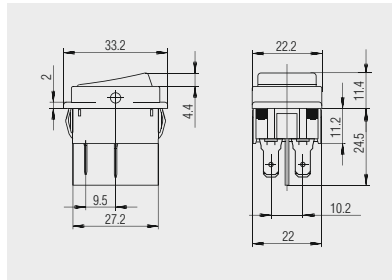
TO 20 (4) A 250 V AC



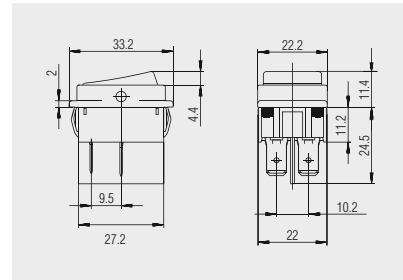
Basic types 1832, 1834, 1835 and 1839
double-pole, lower lying flange illuminated / non-illuminated



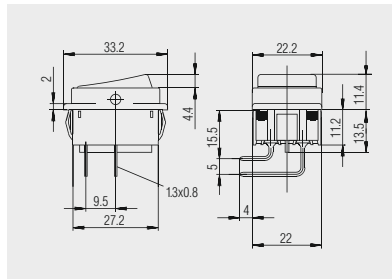
X	Y	Z
0.75 ... 1.25	30 ^{-0.1}	22 ^{+0.2}
1.25 ... 2	30.2 ^{-0.1}	22 ^{+0.2}
2 ... 3	30.6 ^{-0.1}	22 ^{+0.2}



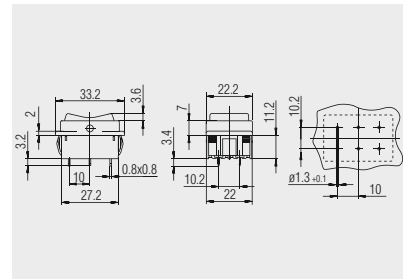
Quick-connect terminal 4.8 x 0.8
basic types 1832 and 1834



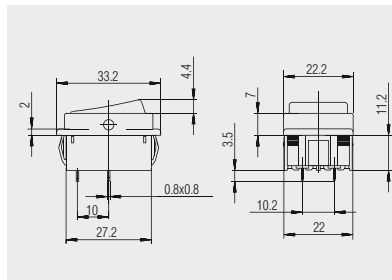
Quick-connect terminal 6.3 x 0.8
basic type 1832



PCB terminal angled
basic types 1832 and 1835



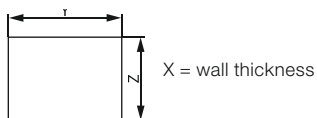
PCB terminal
basic type 1839



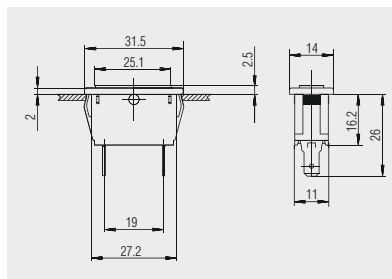
PCB terminal
basic types 1832 and 1835



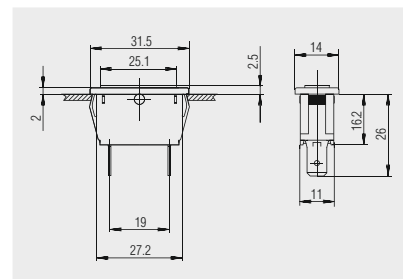
Basic type 1837 lamp
single and double-pole



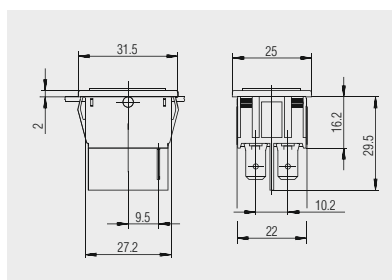
X	Y	Z
0.75 ... 1.25	30 ^{-0.1}	22 ^{+0.2}
1.25 ... 2	30.2 ^{-0.1}	22 ^{+0.2}
2 ... 3	30.6 ^{-0.1}	22 ^{+0.2}



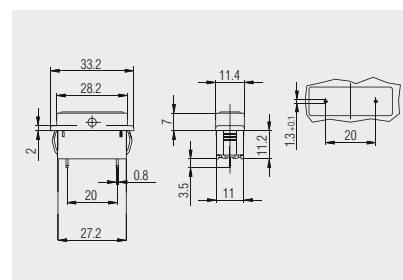
Quick-connect terminal 4.8 x 0.8
single-pole size



Quick-connect terminal 6.3 x 0.8
single-pole size



Quick-connect terminal 6.3 x 0.8
double-pole size



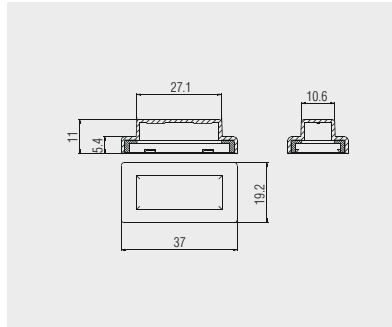
PCB terminal
lower lying flange
1837.2504

SERIES 1830 - SINGLE AND DOUBLE-POLE ROCKER SWITCHES

TO 20 (4) A 250 V AC



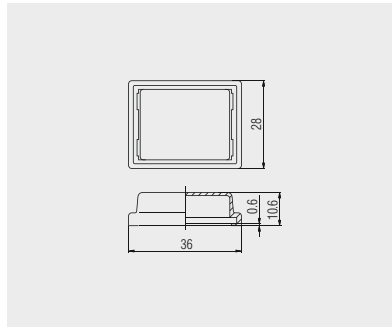
Protection ap
203.731.011



Transparent PVC - protection cap for single-pole switches of basic types 1830, 1831, 1833 and 1838. Serves as dust and water protection of the actuation side.



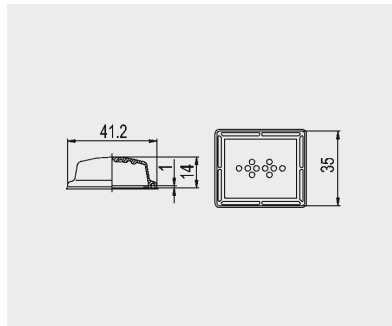
Protection cap
203.201.011



Transparent PVC - protection cap for double-pole switches of basic types 1832, 1834, 1835 and 1839 with frame length 33.2 mm. Serves as dust and water protection of the actuation side.



Protection cap
203.078.011



Transparent PVC-protection cap with burling. Serves as dust and water protection of the actuation side for double-pole basic types 1832, 1834, 1835 and 1839 with standard flange length 30 mm.



Dummy cap
203.145.051



Housing
217.132.031

Housing and dummy cap for double-pole size of basic types 1830, 1831, 1833, 1837 and 1838 of PA black.

Housing and dummy cap must be assembled by the customer and makes only sense in combination



Dummy cap
203.146.051



Housing
217.127.491

Housing and dummy cap for double-pole size of basic types 1832, 1834, 1835 and 1839 of PA black.

Housing and dummy cap must be assembled by the customer and makes only sense in combination

ROCKER SWITCHES

PUSHBUTTON SWITCHES

TOGGLE SWITCHES

SLIDE SWITCHES

ROTARY SWITCHES

FOOT SWITCHES







FACT AND KEY SWITCHES

SNAP-ACTION SWITCHES














MICRO-SIGNAL SWITCHES

SENSORS

















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 $\hat{=}$ 50 000 switching cycles