

1



TECHNICAL INFORMATION

Pages **1.1 - 1.5**

2



APPLIANCE SWITCHES

Pages **2.1- 2.48**

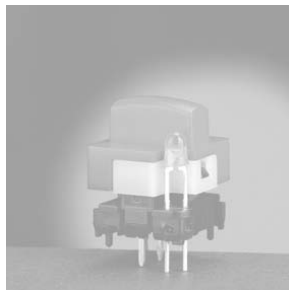
3



SNAP ACTION SWITCHES

Pages **3.1 - 3.33**

4



KEYMODULES

Pages **4.1 - 4.9**

5

INDEX OF PART NUMBERS

pages **5.1 - 5.3**

# CONTENTS APPLIANCE SWITCHES

For an index of all versions on stock and their packaging units see pages **5.2** and **5.3**.

## ROCKER SWITCHES



### SERIES 1900

single pole, without indicator lamp  
6 (2) A 250 V~

Appliance cut-out: 19.2 x 6.8 mm  
23.2 x 6.8 mm  
30.0 x 6.8 mm

Pages  
**2.4 - 2.5**



### SERIES 1800

single pole and double pole  
with and without indicator lamp  
12 (4) A 250 V~

Appliance cut-out: 19.2 x 12.9 mm  
19.2 x 21.9 mm

Pages  
**2.6 - 2.11**



### SERIES 1830

single pole and double pole  
with and without indicator lamp  
20 (4) A 250 V~

Appliance cut-out: 30 x 11 mm  
30 x 22 mm

Pages  
**2.12 - 2.17**



### SERIES 1930

double pole, with and without indicator  
lamp  
with dust and water proofing  
20 (4) A 250 V~

Appliance cut-out: 30 x 22 mm

Pages  
**2.18 - 2.19**



### SERIES 1855

double pole  
with indicator lamp  
4 (1) A 250 V~

Appliance cut-out: 19.2 x 12.9 mm

Pages  
**2.20 - 2.21**



### SERIES 1858

double pole  
without indicator lamp  
10 (4) A 250 V~

Appliance cut-out: 19.2 x 12.9 mm

Pages  
**2.22 - 2.23**



### SERIES 1550

single pole and double pole  
with and without indicator lamp  
16 (4) A 250 V~

Appliance cut-out: 27.2 x 12.2 mm

Pages  
**2.24 - 2.26**

---

**PUSH BUTTON SWITCHES**

---



---

**SERIES 1840 / 5000**

---

single pole  
6 (4) A 250 V~ / 4 (2) A 250 V~

Appliance cut-out: Ø 12 mm / Ø 16 mm

Pages  
**2.27 - 2.29**



---

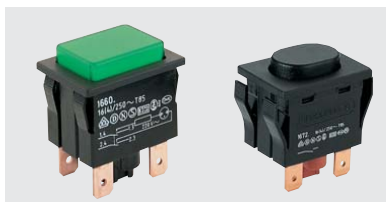
**SERIES 1680**

---

single pole and double pole  
for direct and indirect actuation  
12 (8) A 250 V~

Switch dimensions: 18.5 x 19 x 13 mm  
Appliance cut-out: 19.2 x 12.9 mm

Pages  
**2.30 - 2.34**



---

**SERIES 1660 / 1670**

---

single pole and double pole  
with and without indicator lamp  
16 (4) A 250 V~

Appliance cut-out: 30.0 x 22.2 mm

Pages  
**2.35 - 2.38**

---

**SLIDE SWITCHES**

---



---

**SERIES 4021**

---

double pole  
2 (0,5) A 250 V~

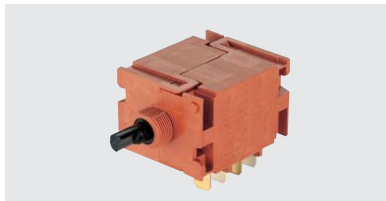
Switch dimensions: 14 x 26 x 16.5 mm  
(H x W x D)

Pages  
**2.39 - 2.40**

---

**ROTARY SWITCHES**

---



---

**SERIES 1703**

---

single pole up to four pole  
20 (4) A 400 V~

Switch dimensions: 26 x 33 x 46 mm  
(H x W x D)

Pages  
**2.41 - 2.42**

---

**TOGGLE SWITCHES**

---



---

**SERIES 1810 / 1820**

---

single pole and double pole  
up to 10 (4) A 250 V~

Appliance cut-out: Ø 12 mm resp.  
19.2 x 12.9 mm  
19.2 x 21.9 mm

Pages  
**2.43 - 2.46**

---

**FOOT SWITCHES**

---



---

**SERIES 2410**

---

single pole and double pole  
6 (2,5) A 250 V~

Dimensions: 39 x 102 x 198 mm  
(H x W x D)

Page  
**2.47**

# SERIES 1900-SINGLE POLE ROCKER SWITCHES

UP TO 6 (2) A 250 V~



## PRODUCT ADVANTAGES

- ◆ Reliable leaf spring contact system, proven a million times
- ◆ Attractive, slimline rocker switch in three different sizes with a silk matt surface and an abrasionproof marking
- ◆ Low space requirements due to small sizes
- ◆ Excellent actuation characteristic
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75 ... 3.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Staked terminals for reliable plugging of connectors
- ◆ Variable connection technique (plug or solder)

## SWITCHING FUNCTIONS

- ◆ Single throw switches

## TERMINAL VERSIONS

- ◆ Solder/quick-connect terminal 4.8 mm

## VERSIONS ON REQUEST

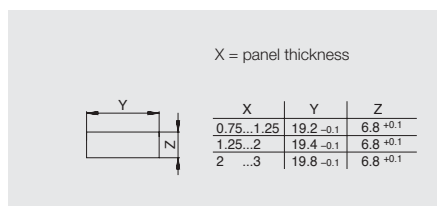
- ◆ Additional terminal versions
- ◆ Additional colours and markings

Standard version

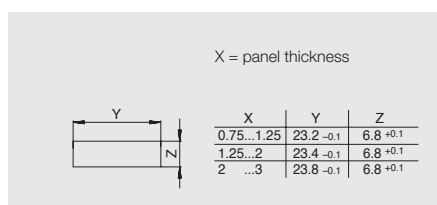


Single throw switch 1901

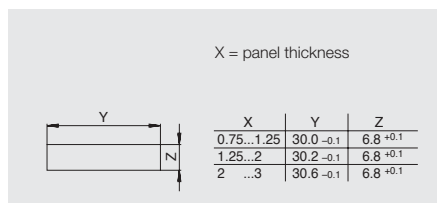
Appliance cut-out




Single throw switch 1911



Single throw 1921



Electrical rating	6 (2) A 250 V~ 4 (1) A 250 V~ 5E4 <b>6 A (1/8 HP) 125 - 250 V AC</b>
Inrush current ST-switches	50 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance	75 E3
Contact resistance (new state)	< 100 mΩ (12 V 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	750 V eff. (between the open contacts) 3750 V (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side -20 °C ...+85 °C no condensation actuating side -20 °C ...+55 °C no condensation
Storage temperature	-40 °C ...+80 °C
Actuating force	2-5 N (depending on switch size)
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker	PA
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054

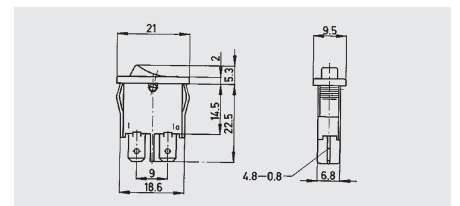
## SINGLE POLE ST-SWITCHES



 1901.1102\*



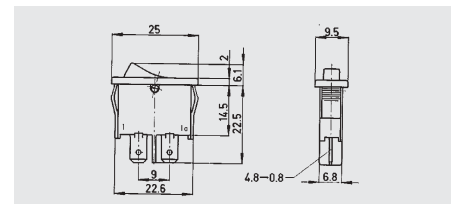
 1901.1103\*



 quick-connect terminal 4.8



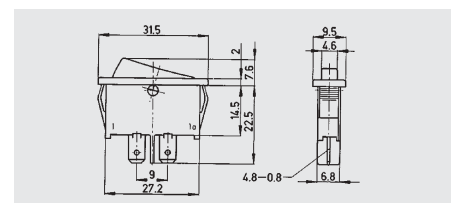
 1911.1102\*



 quick-connect terminal 4.8



 1921.1102\*



 quick-connect terminal 4.8

\* Version on stock

# SERIES 1800 - SINGLE POLE AND DOUBLE POLE ROCKER SWITCHES

UP TO 12 (4) A 250 V~ AND 8 (8) A 250 V~



## PRODUCT ADVANTAGES

- ◆ Switching principle with long life endurance due to a low friction contact system (ball), proven a 100 million times
- ◆ Attractive rocker switches with silk matt surfaces and abrasionproof markings
- ◆ High ratings up to 12 (4) A 250 V ~ resp. 8 (8) A 250 V~ and inrush current peaks up to 70A
- ◆ Suitable for ambient temperatures up to T 100/55
- ◆ High accuracy of fit between rocker and housing
- ◆ Excellent actuation characteristic
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75 ... 3.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Staked terminals for reliable plugging of connectors

## SWITCHING FUNCTIONS

- ◆ Single throw (ST) switches
- ◆ ST- switches with indicator lamp
- ◆ Double throw (DT) switches
- ◆ Double throw switches with centre-OFF
- ◆ Switches with momentary function
- ◆ Pilot lights

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 4.8 mm
- ◆ Solder terminal
- ◆ Straight PCB terminal
- ◆ Angled PCB-terminal

## VERSIONS ON REQUEST

- ◆ With flammability according to UL 94 V-0
- ◆ With gold-plated contacts for low voltages
- ◆ With cutting contacts for applications in a dusty environment
- ◆ With additional supports for PCB assembly
- ◆ With special rocker for snapping on customized actuators

## ACCESSORIES

- ◆ Protection caps against dust and splash water (see page 2.48)

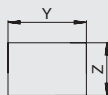
## STANDARD VERSIONS



## APPLIANCE CUT-OUT

### single pole

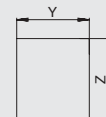
X = panel thickness



X	Y	Z
0.75...1.25	19.2 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>
1.25...2	19.4 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>
2 ...3	19.8 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>

### double pole

X = panel thickness



X	Y	Z
0.75...1.25	19.2 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>
1.25...2	19.4 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>
2 ...3	19.8 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>

Electrical rating (depending on version)	8 (8) A 250 V~ 5E4 12 (4) A 250 V~ 15 A 125 - 250 V AC 3/4 HP 125 V AC 1 1/2 HP 250 V AC
Inrush current ST-switches	70 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance ST / DT DT with centre-OFF	5E4 / 5E4
Contact resistance (new state)	< 100 mΩ (12 V, 1 A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	< 3 mm: 750 V eff. (between the open contacts) ≥ 3 mm: 1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	ST / DT: ≥ 3 mm DT with centre-OFF: < 3 mm (μ)
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	
Terminal side	-20 °C ... +100 °C (no condensation)
Actuating side	-20 °C ... + 55 °C (no condensation)
Storage temperature	-40 °C ... + 80 °C
Actuating force	3-8 N (depending on the switching function)
Flammability	UL 94 V-2
Heat and fire resistant	850 °C (category D)
Material housing and rocker	PA
rocker illuminated	PC
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	or
Suitable for appliances of protection class II	

# SERIES 1800 - SINGLE POLE AND DOUBLE POLE ROCKER SWITCHES

## UP TO 12 (4) A 250 V~ AND 8 (8) A 250 V~

### SINGLE POLE ST-SWITCHES

with indicator lamp

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/2 HP) 250 V AC

ST-switches for 125 V AC on request



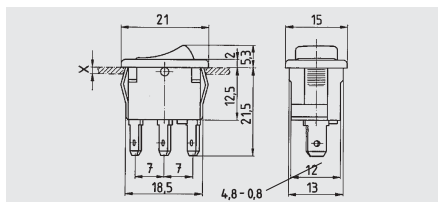
1800.1102\*  
 1800.0102



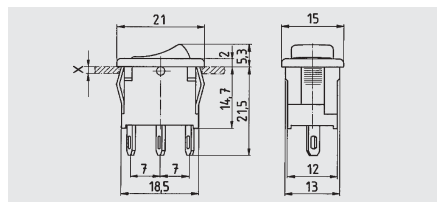
1800.1108\*  
 1800.0108



1800.1104\*



quick-connect terminal 4.8



solder terminal

### DOUBLE POLE ST-SWITCHES

with indicator lamp

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/2 HP) 250 V AC

ST-switches with indicator lamp for  
 12 (4) A 250 V~ resp. 8 (8) A 250 V~,  
 for 125 V AC and for 125 V - 250 V AC  
 on request



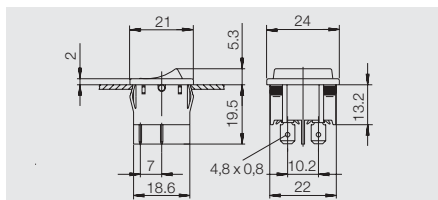
1805.7110\*  
 1805.6102



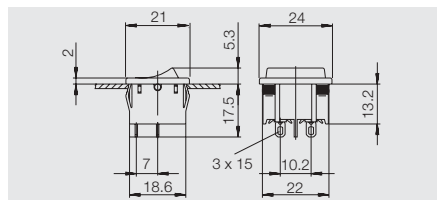
1805.7104\*



1805.7109\*  
 1805.6108



quick-connect terminal 4.8



solder terminal

### SINGLE POLE COMBINATION

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 T 100/55

Additional switching functions on request



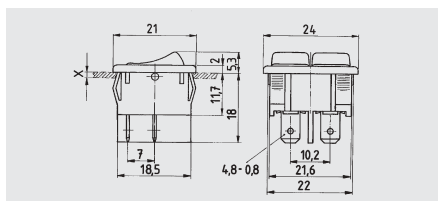
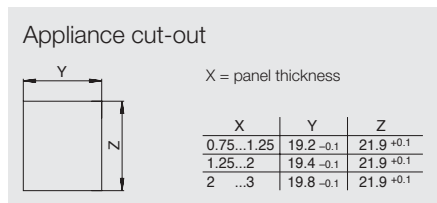
ST-switch / ST-switch

1806.1102\*

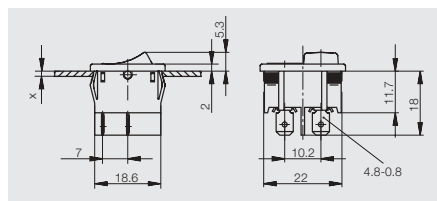


ST-switch / Pilot light

1806.1402



quick-connect terminal 4.8



quick-connect terminal 4.8



## SINGLE POLE ST-SWITCHES

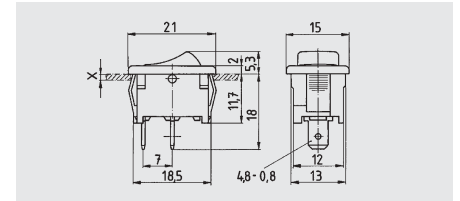
12 (4) A 250 V~  
 8 (8) A 250 V~ 5E4  
 5/70 A 250 V~  
 T 100/55  
 15 A (3/4 HP) 125 V AC  
 15 A (1 1/2 HP) 250 V AC



1801.1121\*  
 1801.0121\*



1801.1908\*  
 1801.0136\*



quick-connect terminal 4.8

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



1801.1101  
 1801.6101



1801.1102\*  
 1801.6102\*  
 1801.5102



1801.1119\*  
 1801.6112



1801.1146\*  
 1801.6115\*  
 1801.2106



1801.1139\*  
 1801.0179



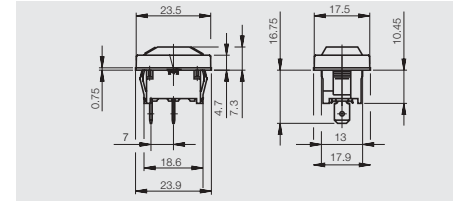
1801.1903

## SINGLE POLE ST-SWITCHES

with installed dust protection cap  
 10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



1801.1403\*



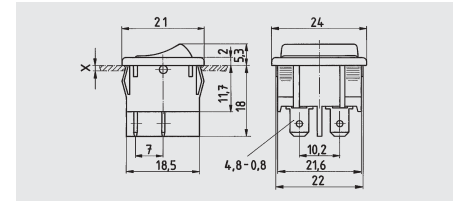
quick-connect terminal 4.8

## DOUBLE POLE ST-SWITCHES

12 (4) A 250 V~  
 8 (8) A 250 V~ 5E4  
 5/70 A 250 V~  
 T 100/55  
 15 A (3/4 HP) 125 V AC  
 15 A (1 1/2 HP) 250 V AC



1802.1123\*  
 1802.0130\*



quick-connect terminal 4.8

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



1802.1108\*  
 1802.6103\*  
 1802.2104  
 1802.5103\*



1802.1101  
 1802.0101



1802.1102\*

\* Version on stock

# SERIES 1800 - SINGLE POLE AND DOUBLE POLE ROCKER SWITCHES

UP TO 12 (4) A 250 V~ AND 8 (8) A 250 V~

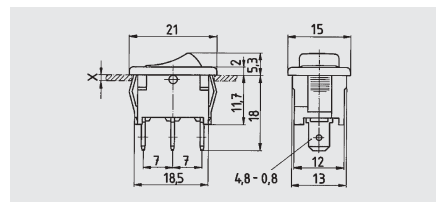
## SINGLE POLE DT-SWITCHES

10 (4) A 250 V~  
6 (4) A 250 V~ 5E4  
T 100/55  
6 A (1/4 HP) 125 V AC  
6 A (1/2 HP) 250 V AC

DT-switches with  and -approval marks for 10 A on request



 1803.1102\*  
 1803.6102\*  
 1803.2102  
 1803.5102



 quick-connect terminal 4.8

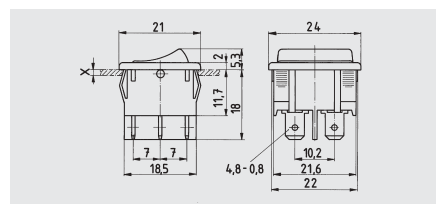
## DOUBLE POLE DT-SWITCHES

10 (4) A 250 V~  
6 (4) A 250 V~ 5E4  
T 100/55  
6 A (1/4 HP) 125 V AC  
6 A (1/2 HP) 250 V AC

DT-switches with  and -approval marks for 10 A on request



 1804.1102\*  
 1804.6102\*  
 1804.2102



 quick-connect terminal 4.8




## SINGLE POLE DT-SWITCHES

with centre-OFF



6 (2) A 250 V~  $\mu$   
T 100/55  
6 A (1/8 HP) 125-250 V AC

Momentary function on one side on request






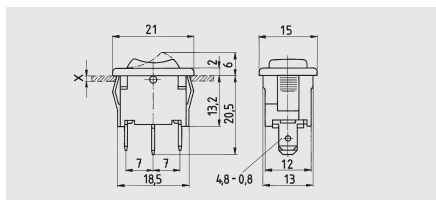
without momentary  
 1808.1102\*  
 1808.0102\*  
 1808.2102\*



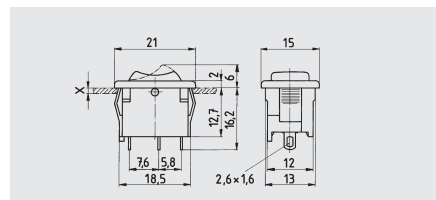
without momentary  
 1808.1103\*  
 1808.0111\*



momentary on both sides  
 1808.1302\*  
 1808.0302\*  
 1808.2302\*



 quick-connect terminal 4.8



 solder terminal


## DOUBLE POLE DT-SWITCHES

with centre-OFF

6 (2) A 250 V~  $\mu$   
T 100/55  
6 A (1/8 HP) 125-250 V AC

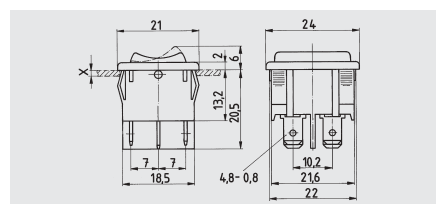
Momentary function from one side on request



without momentary  
 1809.1102\*



momentary on both sides  
 1809.1302\*



 quick-connect terminal 4.8

### SINGLE POLE WITH MOMENTARY FUNCTION

4 (2) A 250 V~  
 T 100/55  
 6 A (1/10 HP) 125 V AC  
 4 A (1/10 HP) 250 V AC



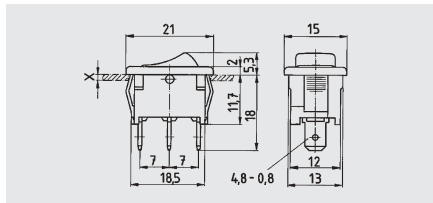
normally closed  
 □ 1801.1302\*



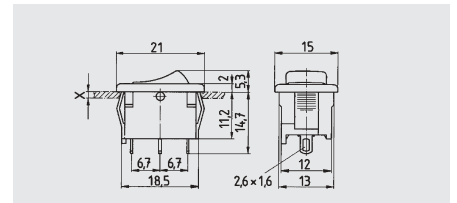
normally open  
 □ 1801.1202\*  
 □ 1801.0202\*



DT momentary  
 □ 1803.1202\*  
 □ 1803.0202\*



□ quick-connect terminal 4.8



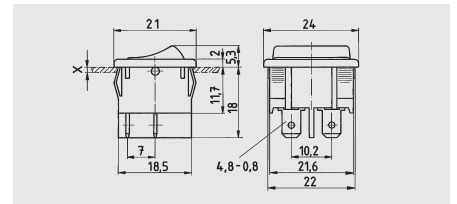
□ solder terminal

### DOUBLE POLE WITH MOMENTARY FUNCTION

4 (2) A 250 V~  
 T 100/55  
 6 A (1/10 HP) 125 V AC  
 4 A (1/10 HP) 250 V AC



normally open  
 □ 1802.1221\*



□ quick-connect terminal 4.8

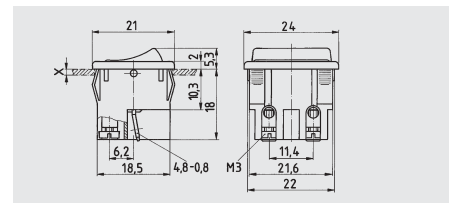
### DOUBLE POLE ST-SWITCHES

for direct connection to the mains

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 5/50 A 250 V~  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



□ □ 1802.3102\*



□ □ quick-connect 4.8 and bush terminals

Higher electrical rating on request

### PILOT LIGHTS

Pilot lights with neon lamps and resistor for 230 V~



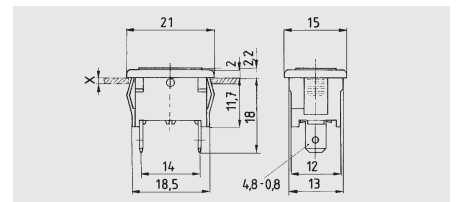
Pilot lights for 125 V AC on request



□ 1807.1102\*



□ 1807.1108



□ quick-connect terminal 4.8

\* Version on stock

# SERIES 1830 - SINGLE POLE AND DOUBLE POLE

## ROCKER SWITCHES UP TO 20 (4) A 250 V~

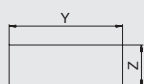


Standard version and appliance cut-out



single pole

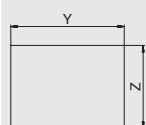
X = panel thickness



X	Y	Z
0.75...1.25	30.0 <sup>-0.1</sup>	11 <sup>+0.1</sup>
1.25...2	30.2 <sup>-0.1</sup>	11 <sup>+0.1</sup>
2 ...3	30.6 <sup>-0.1</sup>	11 <sup>+0.1</sup>

double pole

X = panel thickness



X	Y	Z
0.75...1.25	30.0 <sup>-0.1</sup>	22 <sup>+0.2</sup>
1.25...2	30.2 <sup>-0.1</sup>	22 <sup>+0.2</sup>
2 ...3	30.6 <sup>-0.1</sup>	22 <sup>+0.2</sup>

### PRODUCT ADVANTAGES

- ◆ Switching principle with long life endurance due to a low friction contact system (ball), proven a 100 million times
- ◆ Attractive rocker switches with a silk matt surface and an abrasionproof marking
- ◆ High electrical ratings up to 20 (4) A 250 V~ and inrush current peaks up to 120 A
- ◆ Suitable for ambient temperatures up to T 105/55
- ◆ Excellent actuation characteristic
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75 ... 3.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Locked terminals for safe plugging of the connectors

### SWITCHING FUNCTIONS

- ◆ Single throw (ST) switches
- ◆ ST-switches with indicator lamp
- ◆ Double throw (DT) switches
- ◆ DT-switches with centre-OFF
- ◆ Switches with momentary function
- ◆ Pilot lights

### TERMINAL VERSIONS

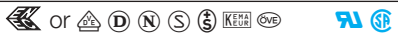
- ◆ Quick-connect terminal 4.8 mm
- ◆ Quick-connect terminal 6.3 mm
- ◆ Solder terminal
- ◆ Straight PCB-terminal
- ◆ Angled PCB-terminal

### VERSIONS ON REQUEST

- ◆ Flammability according to UL 94 V-0
- ◆ Double pole switches with integrated dust protection (see page 2.17)
- ◆ With gold contacts for low voltages
- ◆ Additional colours and markings

### ACCESSORIES

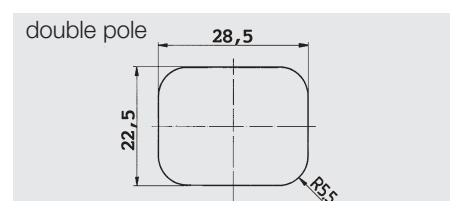
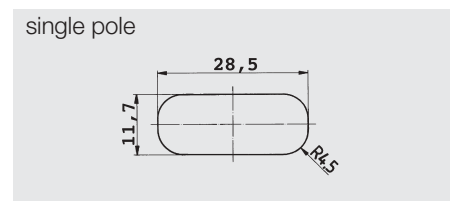
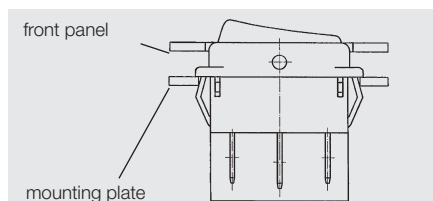
- ◆ Protection caps against dust and splash water for double pole switches (Page 2.48)

Electrical rating (depending on version)	20 (4) A 250 V~ 10 (8) A 250 V~ 5E4  16 A 125 - 250 V AC 1/3 HP 125 V AC 1 HP 250 V AC
Inrush current ST-switches	120 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance ST / DT DT with centre-OFF	1E5 5E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	-20 ... +105 °C no condensation
Terminal side switch not illuminated	-20 ... +85 °C no condensation
Terminal side switch illuminated	-20 ... +55 °C no condensation
Actuating side	-20 ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	3-8 N (depending on the switching function )
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker rocker illuminated	PA PC
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (without pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	

The test conditions comply with EN 610581-1 and UL 1054

#### INSTALLATION EXAMPLE FOR

switches of the series 1830 with design frame



# SERIES 1830 - HIGH INRUSH SINGLE POLE AND DOUBLE POLE

## ROCKER SWITCHES UP TO 20 (4) A 250 V~

### SINGLE POLE ST-SWITCHES

illuminated

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 85/55  
 16 A (1 HP) 250 V AC

Switches for 125 V AC on request



6.3 1830.3111



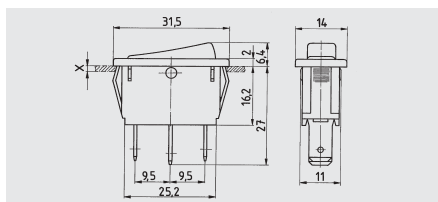
6.3 1830.3112\*



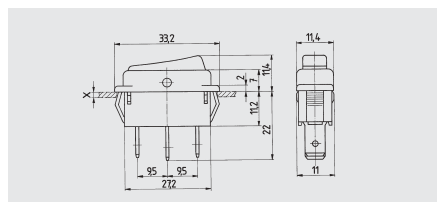
6.3 1830.3118\*



6.3 1830.8112\*



quick-connect terminal 6.3



quick-connect terminal 6.3

### DOUBLE POLE ST-SWITCHES

illuminated

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 85/55  
 16 A (1 HP) 250 V AC

Switches for 125 V AC or 400 V AC on request



6.3 1835.3114



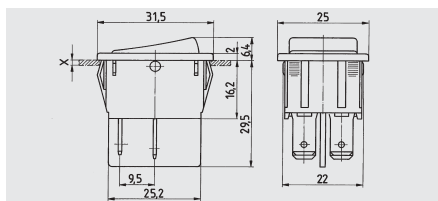
6.3 1835.3112\*



6.3 1835.3111



6.3 1835.3118\*



quick-connect terminal 6.3

### SINGLE POLE ST-SWITCHES

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 105/55  
 16 A (1/3 HP) 125 V AC  
 16 A (1 HP) 250 V AC



6.3 1831.3312\*



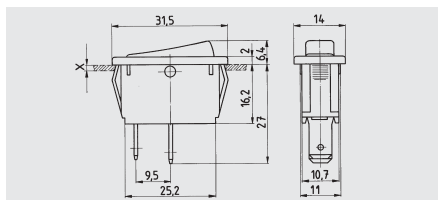
6.3 1831.3313\*  
 1831.0115



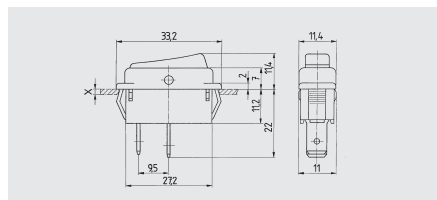
6.3 1831.3933\*  
 1831.0114\*



6.3 1831.8112\*



quick-connect terminal 6.3



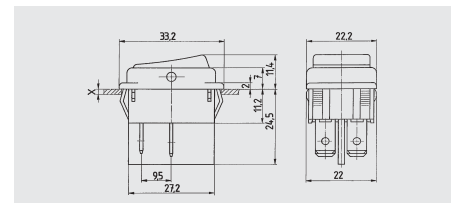
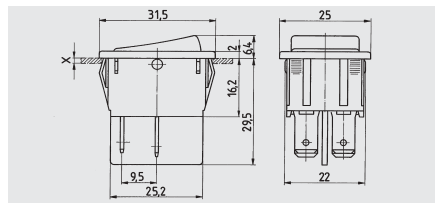
quick-connect terminal 6.3

## DOUBLE POLE ST-SWITCHES

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 105/55  
 16 A (1/3 HP) 125 V AC  
 16 A (1 HP) 250 V AC



6.3 1832.3312\* 6.3 1832.3311\* 6.3 1832.8112\*



quick-connect terminal 6.3

quick-connect terminal 6.3

## SINGLE POLE DT-SWITCHES

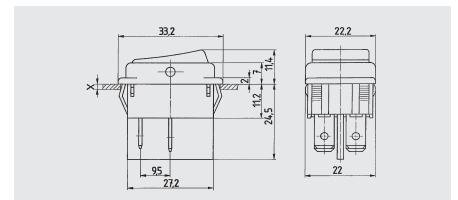
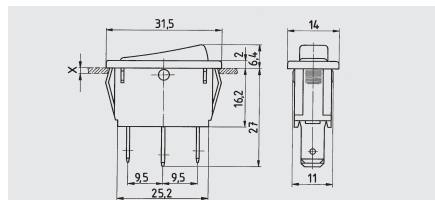
10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 T 105/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



6.3 1833.3302\* 6.3 1833.3305\* 6.3 1833.8102

16 (4) A 250 V~  
 T 105/55  
 16 A (1/3 HP) 125 V AC  
 16 A (1/2 HP) 250 V AC

6.3 1833.3312

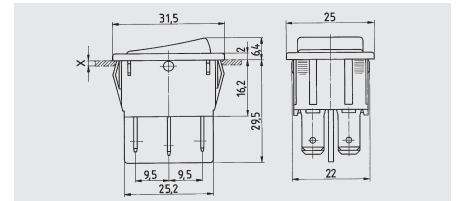


quick-connect terminal 6.3

quick-connect terminal 6.3

## DOUBLE POLE DT-SWITCHES

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 T 105/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



6.3 1834.3302\* 6.3 1834.3309\* quick-connect terminal 6.3

16 (4) A 250 V~  
 T 105/55  
 16 A (1/3 HP) 125 V AC  
 16 A (1/2 HP) 250 V AC

6.3 1834.3312

# SERIES 1830 - HIGH INRUSH SINGLE POLE AND DOUBLE POLE

## ROCKER SWITCHES UP TO 20 (4) A 250 V~

### SINGLE POLE DT-SWITCHES

with centre-OFF

6 (4) A 250 V~

T 105/55

6 A (1/8 HP) 125-250 V AC



without momentary

☐ 6.3 1838.3502\*

☐ 4.8 1838.1502\*



momentary on both sides

☐ 6.3 1838.3402\*

☐ 4.8 1838.1402\*



without momentary

☐ 4.8 1838.1509\*

16 (4) A 250 V~

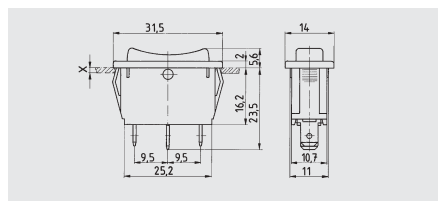
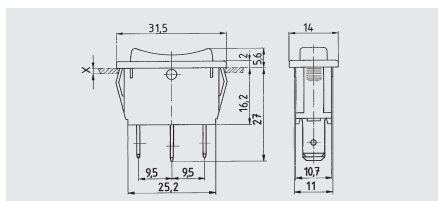
T 105/55

16 A (1/3 HP) 125 V AC

16 A (1/2 HP) 250 V AC

☐ 6.3 1838.3512

☐ 6.3 1838.3412



☐ quick-connect terminal 6.3

☐ quick-connect terminal 4.8

Momentary function on one side on request

### DOUBLE POLE DT-SWITCHES

with centre-OFF

6 (4) A 250 V~

T 105/55

6 A (1/8 HP) 125-250 V AC



without momentary

☐ 6.3 1839.3502\*

☐ 4.8 1839.1502



momentary on both sides

☐ 6.3 1839.3402\*

☐ 4.8 1839.1402\*



momentary on both sides

☐ 4.8 1839.1407\*

16 (4) A 250 V~

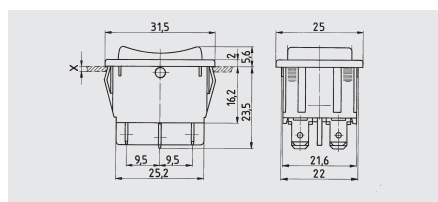
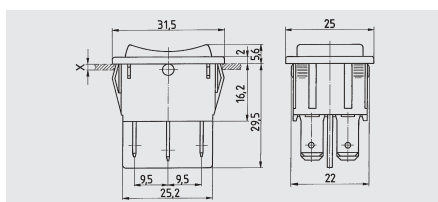
T 105/55

16 A (1/3 HP) 125 V AC

16 A (1/2 HP) 250 V AC

☐ 6.3 1839.3512

☐ 6.3 1839.3412



☐ quick-connect terminal 6.3

☐ quick-connect terminal 4.8

Momentary function on one side on request

### SWITCHES WITH MOMENTARY FUNCTION

4 (2) A 250 V~

T 105/55

6 A (1/10 HP) 125 V AC

4 A (1/10 HP) 250 V AC



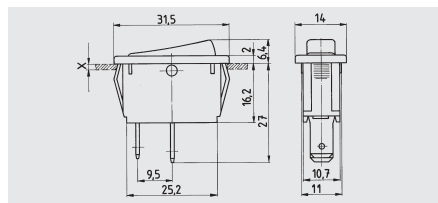
normally open

☐ 6.3 1831.3402



DT momentary

☐ 6.3 1833.3402



☐ quick-connect terminal 6.3



### DOUBLE POLE WITH MOMENTARY FUNCTION

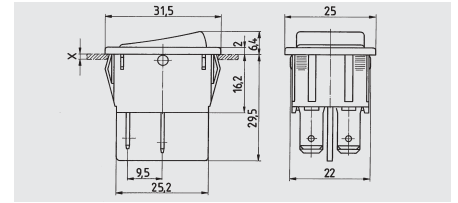
4 (2) A 250 V~  
 T 105/55  
 6 A (1/10 HP) 125 V AC  
 4 A (1/10 HP) 250 V AC



normally open  
 6.3 1832.3407



DT momentary  
 6.3 1834.3402\*



quick-connect terminal 6.3

### PILOT LIGHTS

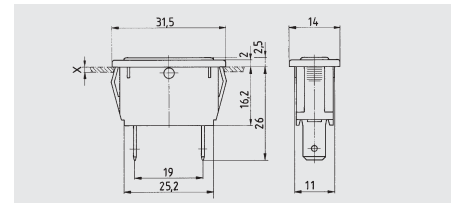
Pilot lights with neon lamp and resistor for 230 V~



Pilot light for 125 V AC according to UL and other colours on request.



6.3 1837.3102\*



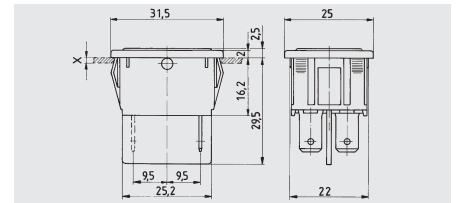
quick-connect terminal 6.3 resp. 4.8



6.3 1837.8102\*



6.3 1837.8108



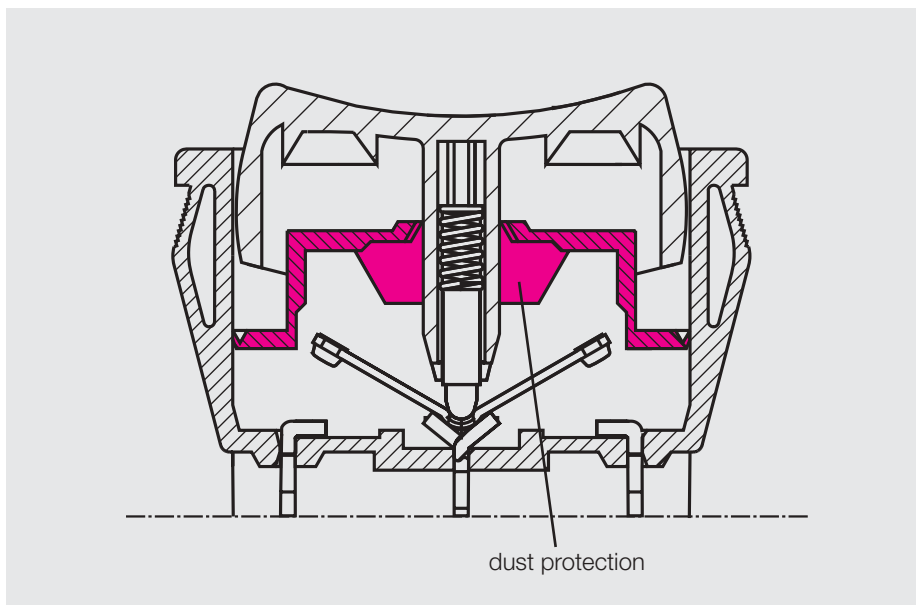
quick-connect terminal 6.3

## SERIES 1830 - ROCKER SWITCHES WITH INTEGRATED DUST PROTECTION

Several double pole versions with integrated dust protection are available in the 1830 series.

The diagram opposite shows how the seal in the switch offers a better protection for the contact system against dust penetration.

On request we will supply the switch versions with this dust protection.



\* Version on stock

# SERIES 1930 - SINGLE AND DOUBLE POLE ROCKER SWITCHES UP TO 20 (4) A 250 V~ WITH IP 65 DUST AND SPLASH WATER PROOFING



## PRODUCT ADVANTAGES

- ◆ Switching principle proven a 100 million times with long life endurance due to a low friction contact
- ◆ Modern rocker design with integrated seal for dust and splash water proofing up to IP 65, an additional protection cap is not necessary
- ◆ High electrical ratings up to 20 (4) A 250 V~ and inrush currents up to 120 A
- ◆ Single pole and double pole versions in the same size and mounting depth
- ◆ Excellent actuation characteristic
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75...3.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Locked terminals for safe plugging

## SWITCHING FUNCTIONS




- ◆ ST-switches
- ◆ ST-switches with indicator lamp
- ◆ DT-switches with centre-OFF
- ◆ DT-switches
- ◆ Switches with momentary function

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 6.3 mm

## VERSIONS ON REQUEST

- ◆ For 125 V AC
- ◆ DT-switches with centre-OFF
- ◆ DT-switches
- ◆ Switches with momentary function

Electrical rating (depending on version)	20 (4) A 250 V~ 10 (8) A 250 V~ 5E4  16 A 125 - 250 V AC 1/3 HP 125 V AC 1 HP 250 V AC
Inrush current ST-switches	120 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance	50E3
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 65
Ambient temperature terminal side	-30 ... +105 °C no condensation
actuating side	-30 ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	3-8 N (depending on the switching function)
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker	PA
rocker illuminated	PC
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Push-on force of connectors	≤ 80 N
Approval marks	  
Suitable for appliances of protection class II	

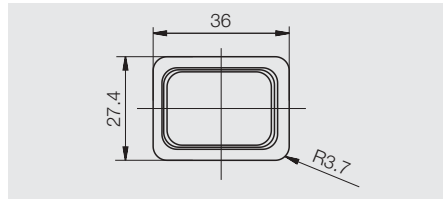
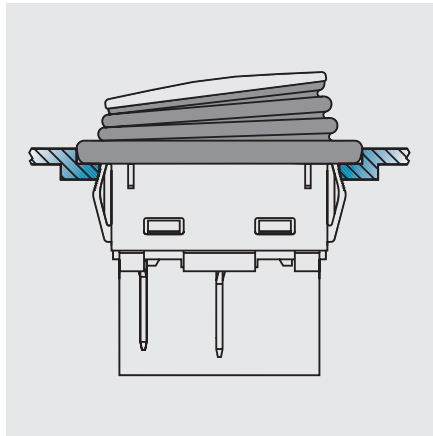
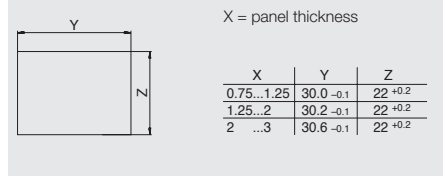
The test conditions comply with EN 61058-1 and UL 1054

## STANDARD VERSION

single pole and double pole



appliance cut-out



## DOUBLE POLE ST-SWITCHES

with indicator lamp

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 105/55  
 16 A (1 HP) 250 V AC

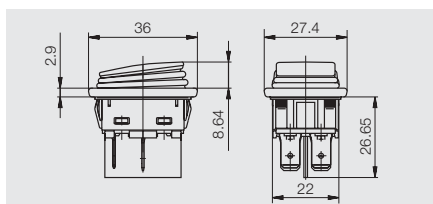


6.3 1935.3112\*

6.3 1935.3113\*

6.3 1935.3114\*

6.3 1935.3118\*



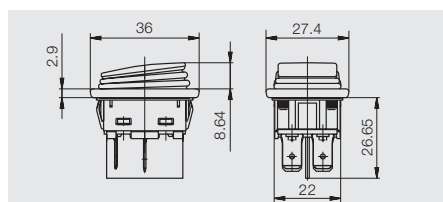
quick-connect terminal 6.3

## DOUBLE POLE ST-SWITCHES

20 (4) A 250 V~  
 10 (8) A 250 V~ 5E4  
 5/120 A 250 V~  
 T 105/55  
 16 A (1 HP) 250 V AC



6.3 1932.3112\*



quick-connect terminal 6.3

\* Version on stock

# SERIES 1855 - DOUBLE POLE ROCKER SWITCHES WITH INDICATOR LAMP UP TO 4 (1) A 250 V~



## PRODUCT ADVANTAGES

- ◆ Reliable leaf spring contact system, proven a million times
- ◆ Double pole rocker switches with indicator lamp in a very small size
- ◆ Rocker switches with a silk matt surface and an abrasion proof marking
- ◆ High accuracy between rocker and housing
- ◆ Excellent actuation characteristic
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75 ... 3.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Staked terminals for reliable plugging of connectors

## SWITCHING FUNCTIONS

- ◆ ST-switch with indicator lamp

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 4.8 mm
- ◆ Solder terminal

## VERSIONS ON REQUEST

- ◆ For 125 V AC
- ◆ Additional colours and markings

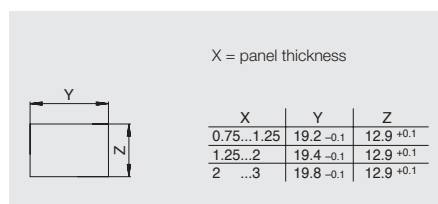
## ACCESSORIES


- ◆ Protection caps against dust and splash water (see page 2.48)

Standard version



Appliance cut-out



Electrical rating	4 (1) A 250 V~ 4 A 250 V AC 1/10 HP 250 V AC
Inrush current	50 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance	5E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side -20 ... +85 °C no condensation actuating side -20 ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	5 N
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker	PA
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	



The test conditions comply with EN 61058-1 and UL 1054



## DOUBLE POLE ST-SWITCHES

with indicator lamp  
4 (1) A 250 V~  
4 A 250 V AC  
1/10 HP 250 V AC

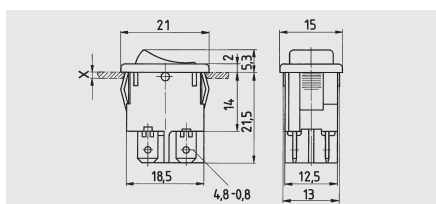
Switches for 125 V AC on request



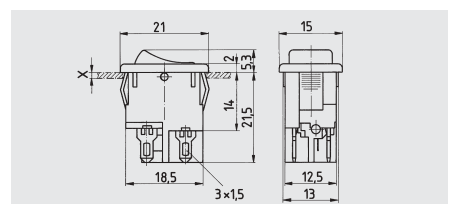
 4.8 1855.1102\*  
 1855.0102\*

 4.8 1855.1108\*  
 1855.0108\*

 4.8 1855.1104\*



 quick-connect terminal 4.8



 solder terminal

\* Version on stock

# SERIES 1858 - DOUBLE POLE ROCKER SWITCHES UP TO 10(4)A

## INRUSH CURRENTS UP TO 100 A



### PRODUCT ADVANTAGES

- ◆ Switching system with long life endurance, proven a million times
- ◆ Attractive rocker switches with a silk matt surface and an abrasionproof marking
- ◆ Material immediately self-extinguishing (UL 94 V-0)
- ◆ Suitable for inrush currents 100 A (capacitive according EN 61058-1) and ambient temperatures up to T 100/55
- ◆ Single pole and double pole versions in the same size and mounting depth
- ◆ Simple snap-on assembly for appliance panel thickness of 0.75 ... 3.00 mm
- ◆ Tight fit in appliance cut-out due to compensation ribs on the switch housing
- ◆ Double fixed terminals for safe plugging of the connectors

### SWITCHING FUNCTIONS

- ◆ ST-switch

### TERMINAL VERSIONS

- ◆ Quick-connect terminal 4.8 mm
- ◆ Solder terminal
- ◆ PC-terminal
- ◆ Angled PC-terminal

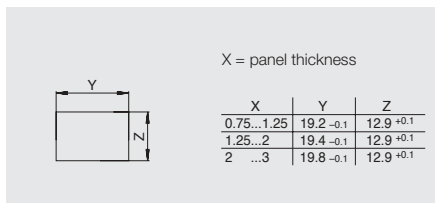
### VERSIONS ON REQUEST

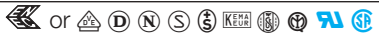
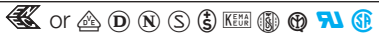
- ◆ Single pole switches
- ◆ Additional colours and markings

### ACCESSORIES

- ◆ Protection cap against dust and splash water (see page 2.48)

Standard version and appliance cut-out



Electrical rating	10 (4) A 250 V~ 6 (4) A 250 V~ 5E4 5/100 A 250 V~ 12 A 125 - 250 V AC 1/3 HP 125 V AC 1/2 HP 250 V AC
Inrush current	100 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance	1E5
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side -20 ... +100 °C no condensation actuating side -20 ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	3 N
Flammability	
Rocker and housing black	UL 94 V-0
Rocker and housing other colours	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker	PA
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	 or 
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054



## DOUBLE POLE ST-SWITCHES

10 (4) A 250 V~  
6 (4) A 250 V~ 5E4  
5/100 A 250 V~  
12 A (1/3 HP) 125 V AC  
12 A (1/2 HP) 250 V AC






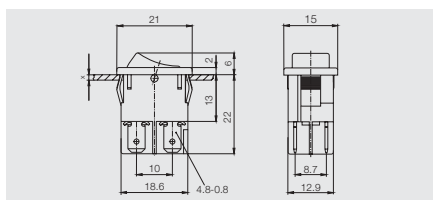
 1858.1102\*  
 1858.4202\*



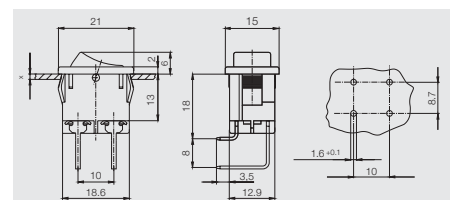
 1858.1103\*  
 1858.0103\*



 1858.1104\*  
 1858.0104  
 1858.4205\*



 quick-connect terminal 4,8

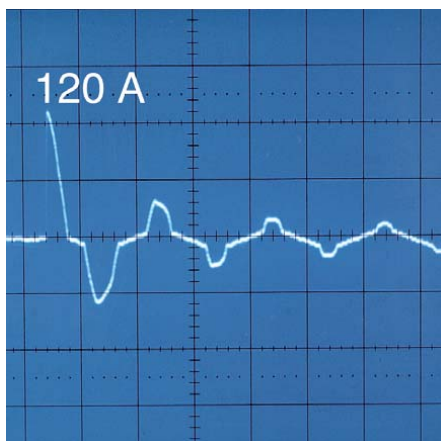


 angled PC-terminal

\* Version on stock

# SERIES 1550 - SINGLE POLE AND DOUBLE POLE ROCKER SWITCHES

UP TO 16 (4) A 250 V~ INRUSH CURRENTS UP TO 100 A



## PRODUCT ADVANTAGES

- ◆ Single pole and double pole rocker switches in the same size with ratings up to 16 (4) A 250 V~
- ◆ Inrush currents up to 100 A
- ◆ Excellent actuation characteristic due to snap-action contacting system
- ◆ Forced mechanical opening in the event that contacts weld together under extremely high switching loads
- ◆ Silk matt surface with an abrasionproof marking
- ◆ High accuracy of fit between rocker and housing
- ◆ Prominent lighting by lens effect
- ◆ For ambient temperatures up to T 100/55
- ◆ Simple snap-on assembly for appliance panel thickness of 0.80 ... 5.00 mm
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing
- ◆ Locked terminals for safe plugging of the connectors

## SWITCHING FUNCTIONS SINGLE AND DOUBLE POLE

- ◆ ST-switch
- ◆ ST-switch with indicator lamp
- ◆ Switch with momentary function

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 6.3 mm
- ◆ Solder terminal
- ◆ PC-terminal
- ◆ Angled PC-terminal

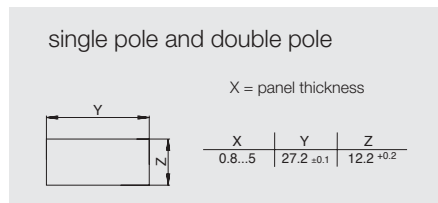
## VERSIONS ON REQUEST

- ◆ With flammability according to UL 94 V-0
- ◆ For inrush currents up to 120 A
- ◆ With gold contacts for low voltages
- ◆ Switches with additional supports for PCB assembly

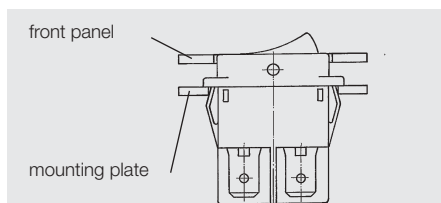
Standard versions



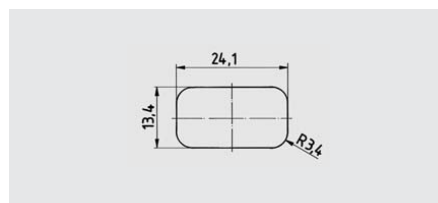
Appliance cut-out




Installation example



Appliance cut-out



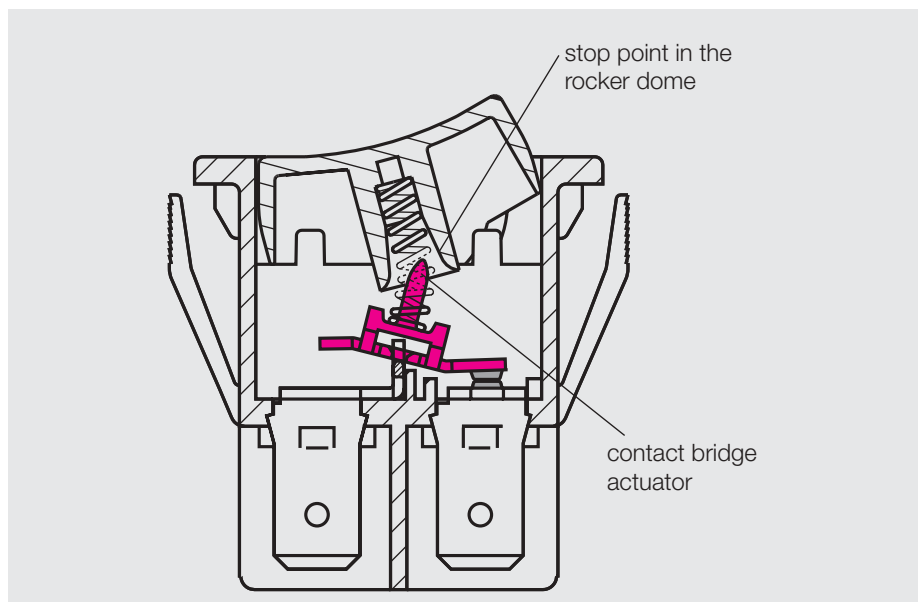


Electrical rating	16 (4) A 250 V~ 10 (4) A 250 V~ 5E4 5/100 A 250 V~  16 A 125 - 250 V AC 1 HP 125 V AC 2 HP 250 V AC
Inrush current ST-switches	100 A capacitive 10 <sup>4</sup> operations
Mechanical life endurance	≥ 5E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side -20 °C ... +100 °C no condensation actuating side -20 °C ... + 55 °C no condensation
Storage temperature	-40 °C ... + 80 °C
Actuating force	3-5 N
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and rocker rocker illuminated	PA PA/PC
Contacts	Ag
Terminals	CuZn resp. silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054

## FORCED CONTACT OPENING

The series 1550 is designed in order to force mechanically welded contacts (melting under heat) which may occur at extremely high switching loads to open.



# SERIES 1550 - SINGLE POLE AND DOUBLE POLE ROCKER SWITCHES

UP TO 16 (4) A 250 V~ INRUSH CURRENTS UP TO 100 A

## ST-SWITCHES

with indicator lamp

16 (4) A 250 V~  
10 (4) A 250 V~ 5E4  
5/100A 250 V~  
16 A (2 HP) 250 V AC

Switches for 125 V AC and single pole versions on request



double pole  
□ 1555.3104\*



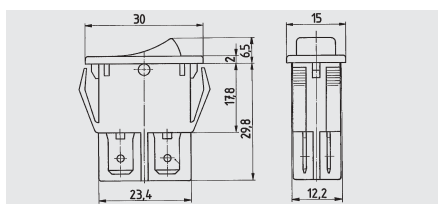
double pole  
□ 1555.3102\*



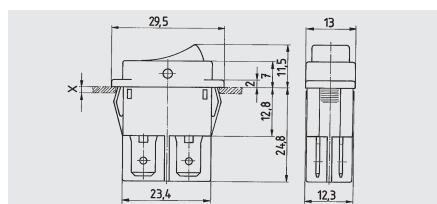
double pole  
□ 1555.3108\*



double pole  
□ 1555.3604



□ quick-connect terminal 6.3



□ quick-connect terminal 6.3

## ST-SWITCHES

16 (4) A 250 V~  
10 (4) A 250 V~ 5E4  
5/100A 250 V~  
16 A 125 - 250 V AC  
1 HP 125 V AC  
2 HP 250 V AC



single pole  
□ 1551.3102\*



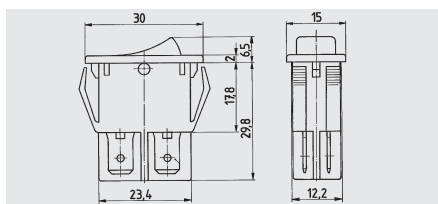
double pole  
□ 1552.3102\*



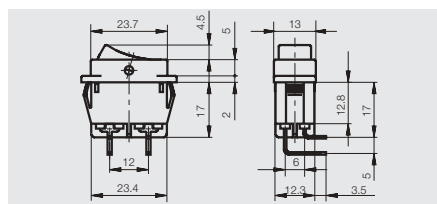
double pole  
□ 1552.3602\*  
▭ 1552.2602  
▭ 1552.4602\*



double pole  
▭ 1552.4606\*



□ quick-connect terminal 6,3



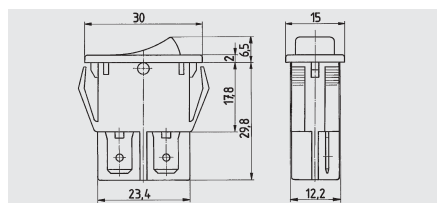
▭ angled PC-terminal

## SWITCHES WITH MOMENTARY FUNCTION

16 (4) A 250 V~  
10 (4) A 250 V~ 5E4  
5/100A 250 V~  
16 A 125 - 250 V AC  
1 HP 125 V AC  
2 HP 250 V AC



single pole NO  
□ 1551.3202\*



□ quick-connect terminal 6.3

# SERIES 5000 - SINGLE POLE PUSH BUTTON SWITCHES

UP TO 4(2) A 250 V~



## PRODUCT ADVANTAGES

- ◆ Switching system with long life endurance, proven a million times
- ◆ With dust and splash water proofing according to IP 54
- ◆ Simple snap-on assembly for appliance panel thickness of 0.80 ... 5.00 mm

## SWITCHING FUNCTIONS

- ◆ Switch with momentary function (NO)

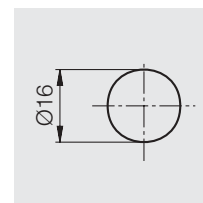
## TERMINAL VERSIONS

- ◆ Quick-connect terminal 2.8 mm

## VERSIONS ON REQUEST

- ◆ Different colours of actuating caps

Electrical rating	4 (2) A 250 V~ 5E4 4 A 125 V AC 1/10 HP 2 A 250 V AC 1/10 HP
Mechanical life endurance	2E5
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40 / IP 54
Ambient temperature	terminal side -20 °C ... +85 °C no condensation actuating side -20 °C ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material push button and housing	PA
Contacts	AgCu
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Push-on force of connectors	≤ 64 N
Approval marks	
Suitable for appliances of protection class II	



Appliance cut-out

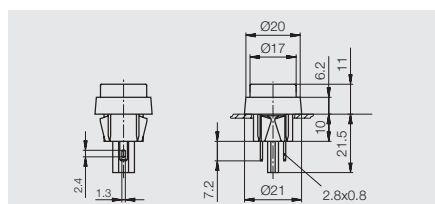
The test conditions comply with EN 61058-1 and UL 1054



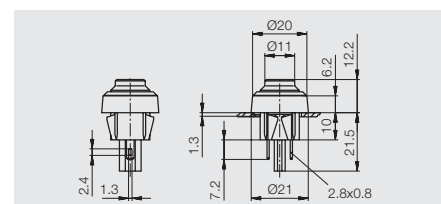
5000.0101



5000.0501  
with dust and  
water protection



quick-connect terminal 2.8



quick-connect terminal 2.8

# SERIES 1840 - SINGLE POLE PUSH BUTTON SWITCHES

UP TO 6 (4) A 250V~



## PRODUCT ADVANTAGES

- ◆ Switching principle with long life endurance due to a low friction contact system (ball), proven a 100 million times
- ◆ Excellent actuation characteristic (tactile feel)
- ◆ Simple assembly due to round appliance cut-out and screw fastening
- ◆ Staked terminals for reliable plugging of connectors
- ◆ Button for snapping on customized actuating caps

## SWITCHING FUNCTIONS

- ◆ ST-switch
- ◆ DT-switch
- ◆ Switch with momentary function

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 4.8 mm
- ◆ Solder terminal

## VERSIONS ON REQUEST

- ◆ Double pole switches
- ◆ Other terminal versions

## ACCESSORIES

- ◆ Protective screw-on against dust and splash water
- ◆ Different push buttons

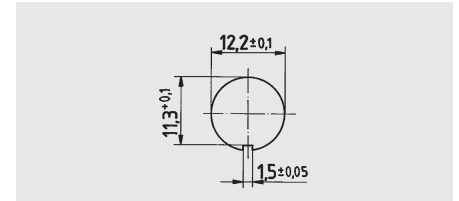
Electrical rating	6 (4) A 250 V~ 5E4 6 A 125 - 250 V AC 1/4 HP 125 V AC 1/2 HP 250 V AC
Mechanical life endurance	1E5
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side -20 °C ... +100 °C no condensation actuating side -20 °C ... + 55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	6-9 N (depending on the switching function)
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and push button	PA
Contacts	Ag
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054

# SERIES 1840 - SINGLE POLE PUSH BUTTON SWITCHES

UP TO 6 (4) A 250V~

## STANDARD VERSION/APPLIANCE CUT-OUT

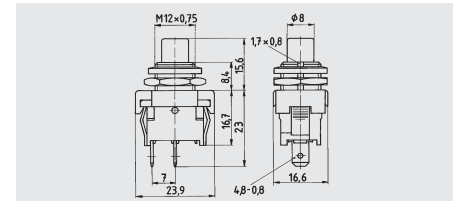


## SINGLE POLE ST-SWITCHES

6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



☐ 4.8 1841.1101\*  
 ☐ 1841.0101\*



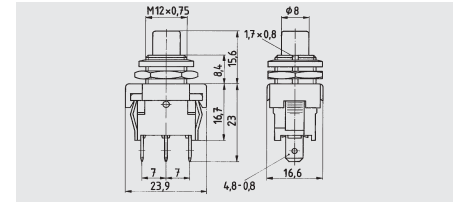
☐ quick-connect terminal 4.8

## SINGLE POLE DT-SWITCHES

6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



☐ 4.8 1843.1101\*



☐ quick-connect terminal 4.8

## SINGLE POLE WITH MOMENTARY FUNCTION

6 (2) A 250 V~  
 T 100/55  
 6 A (1/8 HP) 125-250 V AC



normally closed  
 ☐ 4.8 1841.1301\*



normally open  
 ☐ 4.8 1841.1201\*



DT momentary  
 ☐ 4.8 1843.1201\*

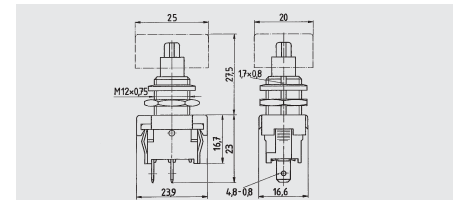
## SINGLE POLE ST-SWITCHES

for snap-on push buttons

6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC



☐ 4.8 1841.6101\*



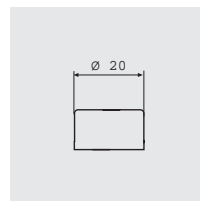
☐ quick-connect terminal 4.8

Please order push buttons separately.

Additional versions on request



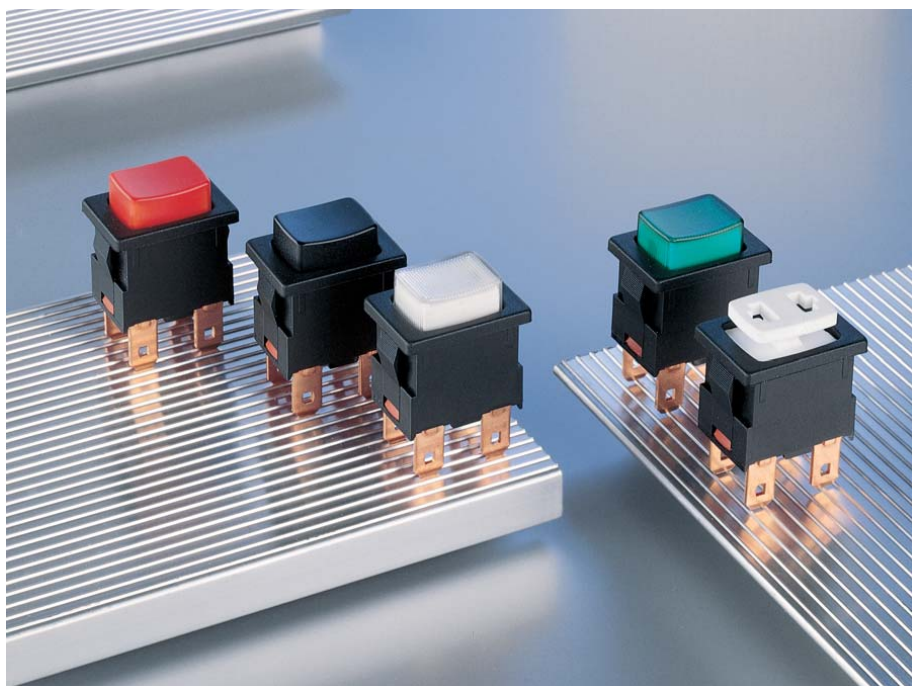
205 008 011



\* Version on stock

# SERIES 1683 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 12 (8) A 250 V~



### PRODUCT ADVANTAGES

- ◆ Double lifting contact system proven a million times
- ◆ High rating up to 12 (8) A 250 V~
- ◆ Small size for single and double pole versions
- ◆ Functionally reliable switching system up to 5E5 switching cycles (mechanically) due to two-sided switching core
- ◆ High electrical reliability due to separate spark chambers. Approved for high actuating speed according to EN 61058 (paragraph 17.2.6)

### SWITCHING FUNCTIONS

- ◆ ST-switch
- ◆ ST-momentary function

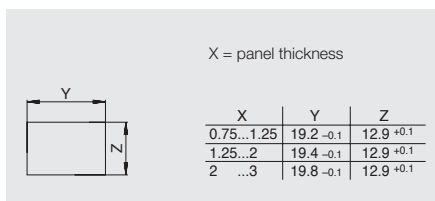
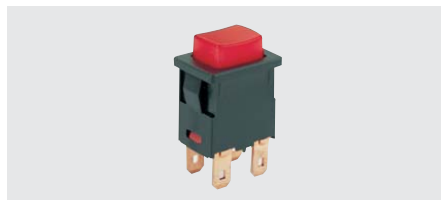
### TERMINAL VERSIONS

- ◆ Quick-connect-/solder-combination 4.8 mm vertical
- ◆ Quick-connect-/solder-combination 4.8 mm horizontal
- ◆ PC-terminal vertical
- ◆ PC-terminal horizontal

### VERSIONS ON REQUEST

- ◆ Different colours of actuating caps
- ◆ Design adapter for snapping on customized caps
- ◆ ST-momentary function

Standard version and appliance cut-out



# SERIES 1683 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 12 (8) A 250 V~

Electrical rating	12 (8) A 250 V~ 10 (8) A 250 V~ 5E4 <b>12 A 125 - 250 V AC</b> <b>1/2 HP 125 - 250 V AC</b>
Mechanical life endurance	≥ 1E5
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side: -20 °C ... +100 °C no condensation actuating side: -20 °C ... + 55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	single pole non-illuminated: ca. 8 N single pole illuminated and double pole: ca. 12 N
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (categoryD)
Material	socket and housing: PA push button: PC
Contacts	Ag
Terminals	Cu resp. silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)
Push-on force of connectors	≤ 80 N
Approval marks	
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054

### ST-SWITCHES

with indicator lamp

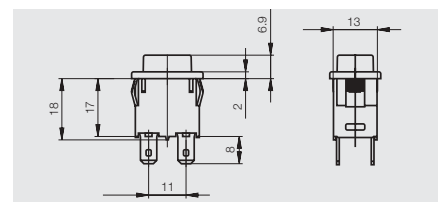
12 (8) A 250 V~  
10 (8) A 250 V~ 5E4  
T 100/55  
**12 A (1/2 HP) 125-250 V AC**



single pole  
□ 1686.1101\*



double pole  
□ 1687.1104\*



□ quick-connect terminal 4.8

### ST-SWITCHES

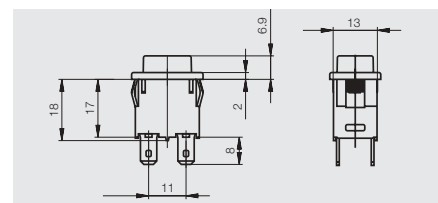
12 (8) A 250 V~  
10 (8) A 250 V~ 5E4  
T 100/55  
**12 A (1/2 HP) 125-250 V AC**



single pole  
□ 1683.1101\*



double pole  
□ 1684.1101\*



□ quick-connect terminal 4.8

\* Version on stock

# SERIES 1680 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 12 (8) A 250 V~



Standard version



### PRODUCT ADVANTAGES

- ◆ Contact system with bridging contacts, proven a million times
- ◆ High electrical rating
- ◆ High mechanical load capacity up to 750 N (installation-dependent), e.g. for foot switches
- ◆ Optimum button guide
- ◆ Functionally reliable switching system up to 15E4 cycles (mechanical) due to two-sided switching core
- ◆ Small size for single pole and double pole versions
- ◆ For direct and indirect actuation
- ◆ Safe solder connections due to double PCB pins
- ◆ Variable actuator lengths
- ◆ Safe fitting of the actuating caps due to longer guide

### SWITCHING FUNCTIONS

- ◆ ST-switch
- ◆ DT-switch (Normally open)

### TERMINAL VERSIONS

- ◆ Quick-connect-/solder-combination 4.8 mm vertical
- ◆ Quick-connect-/solder-combination 4.8 mm horizontal
- ◆ PC-terminal vertical
- ◆ PC-terminal horizontal

### VERSIONS ON REQUEST

- ◆ PCB versions with additional lugs for relieving the strain on the PCB solder points
- ◆ DT-switches (Normally open)

### ACCESSORIES

- ◆ Customized actuating caps on request



# SERIES 1680 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 12 (8) A 250 V~

Electrical rating	12 (8) A 250 V~ 10 (8) A 250 V~ 5E4 <b>12 A 125 - 250 V AC</b> <b>1/2 HP 125 - 250 V AC</b>	
Mechanical life endurance	≥ 15E4	
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)	
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)	
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)	
Resistance to tracking	PTI 250	
Contact gap	≥ 3 mm	
Insulation spacing	≥ 8 mm	
Protection type	IP 40	
Ambient temperature	terminal side	-20 °C ... +100 °C no condensation
	actuating side	-20 °C ... + 55 °C no condensation
Storage temperature	-40 ... +80 °C	
Actuating force	single pole	ca. 7 N
Actuating force	double pole	ca. 9 N
Flammability	push button	UL 94 V-0
	socket	UL 94 V-1
	housing	UL 94 V-2
Heat and fire-resistance	850 °C (category D)	
Material	push button	PBTP
	socket	PA
	housing	PA
Contacts	Ag	
Terminals	Cu resp. silver-plated	
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)	
Solderability of terminals	max. 350 °C, 3 sec. (no pressure on the terminals when soldering by hand!)	
Push-on force of connectors	≤ 80 N	
Approval marks		
Suitable for appliances of protection class II		

The test conditions comply with EN 61058-1 and UL 1054

### SINGLE POLE ST-SWITCHES

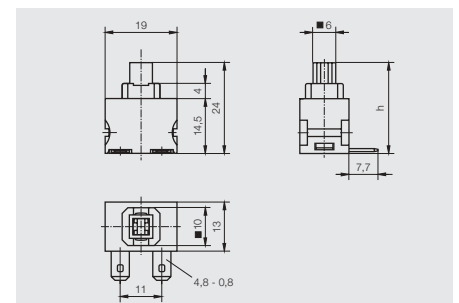
for snapping on customized actuating caps

12 (8) A 250 V~  
10 (8) A 250 V~ 5E4  
T 100/55  
**12 A (1/2 HP) 125 - 250 V AC**



1681.3701\*

Switching position	h
OFF	24,0
ON	21,3
Block	19,7



# SERIES 1680 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 12 (8) A 250 V~

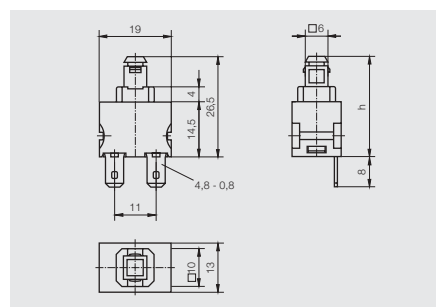
### SINGLE POLE ST-SWITCHES

12 (8) A 250 V~  
 10 (8) A 250 V~ 5E4  
 T 100/55  
 12 A (1/2 HP) 125 - 250 V AC



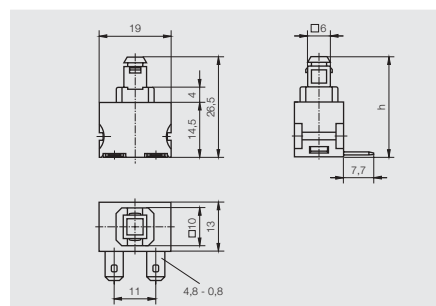
1681.1101\*

Switching position	h
OFF	26,5
ON	23,8
Block	22,2



1681.3101\*

Switching position	h
OFF	26,5
ON	23,8
Block	22,2



### SINGLE POLE ST-SWITCHES

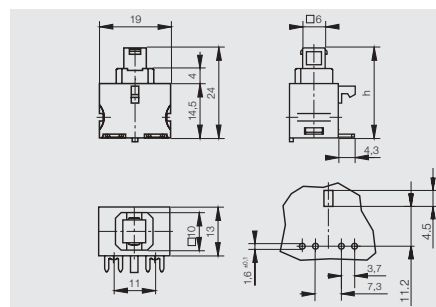
with short actuator

12 (8) A 250 V~  
 10 (8) A 250 V~ 5E4  
 T 100/55  
 12 A (1/2 HP) 125 - 250 V AC



1681.4402\*

Switching position	h
OFF	24,0
ON	21,3
Block	19,7



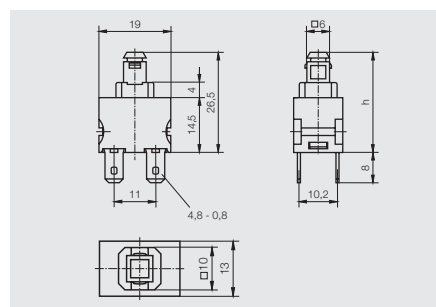
### DOUBLE POLE ST-SWITCHES

12 (8) A 250 V~  
 10 (8) A 250 V~ 5E4  
 T 100/55  
 12 A (1/2 HP) 125 - 250 V AC



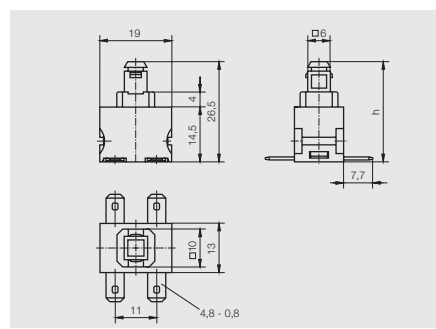
1682.1101\*

Switching position	h
OFF	26,5
ON	23,8
Block	22,2



1682.3101\*

Switching position	h
OFF	26,5
ON	23,8
Block	22,2



# SERIES 1660 / 1670 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 16 (4) A 250 V~



### PRODUCT ADVANTAGES

- ◆ The switches of the 1670 series contain an integrated gasket between the actuator and the switch housing.
- ◆ Switching system (snap-action contact), proven a million times
- ◆ High ratings up to 16(4)A 250V~
- ◆ Opening and closing speed independent of the actuating speed
- ◆ Contact system with bridging contacts
- ◆ Push button switches with a silk matt surface and an abrasionproof marking
- ◆ Versions with indicator lamp also available with separate lamp connection (switch with integrated signal lamp)
- ◆ Single pole and double pole switches in the same size
- ◆ Simple snap-on assembly
- ◆ Tight fit in appliance cut-out due to tolerance compensation ribs on the switch housing



### SWITCHING FUNCTIONS

- ◆ ST-switch, switch with momentary function (NC and NO)
- ◆ ST-switch with indicator lamp
- ◆ DT-switch/DT-switch with momentary function
- ◆ ST-switch, switch with momentary function (NC and NO) with separate lamp connection
- ◆ Pilot light

### TERMINAL VERSIONS

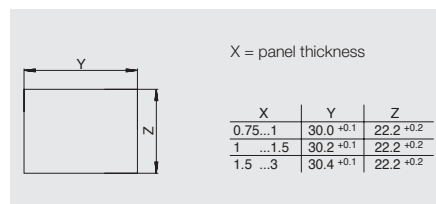
- ◆ Quick-connect terminal 6.3
- ◆ Quick-connect terminal 4.8
- ◆ Quick-connect terminal 6.3 with 2 x 4.8 for separate lamp connection

### VERSIONS ON REQUEST

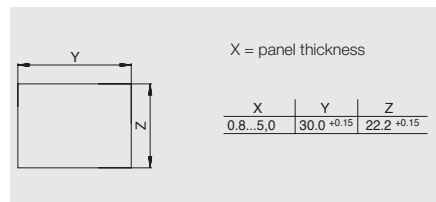
- ◆ With  and -approval marks
- ◆ For customized push buttons

# SERIES 1660 / 1670 - POWERFUL SINGLE POLE AND DOUBLE POLE PUSH BUTTON SWITCHES UP TO 16 (4) A 250 V~

## STANDARD VERSION SERIES 1660



## STANDARD VERSION SERIES 1670



Electrical rating	16 (4) A 250 V~
Mechanical life endurance	5E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ 500 V DC (between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type series 1660	IP 40
Protection type series 1670	IP 54
Ambient temperature	terminal side -20 °C ... +85 °C no condensation actuating side -20 °C ... +55 °C no condensation
Storage temperature	-40 ... +80 °C
Actuating force	ca. 8 N
Flammability	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material	housing and push button PA push button illuminated PC
Contacts	Ag
Terminals	Cu
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Push-on force of connectors	≤ 80 N
Approval marks	Series 1660 additionally
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1 and UL 1054



# SERIES 1660 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 16 (4) A 250 V~

### DOUBLE POLE ST-SWITCHES

with indicator lamp

16 (4) A 250 V~

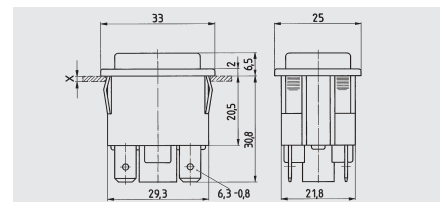
Switches for 125 V AC or 250 V AC with  and -approval marks and single pole versions on request.



 1660.0202\*



 1660.0201\*





 quick-connect terminal 6.3

### DOUBLE POLE ST-SWITCHES

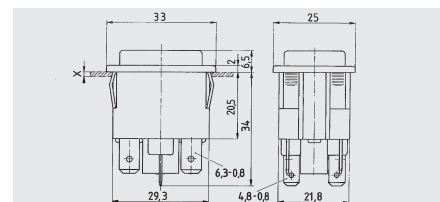
with indicator lamp and separate lamp connection. The indicator lamp is independent of the switching system.


16 (4) A 250 V~

Switches for 125 V AC or 250 V AC with  and -approval marks and single pole versions on request.



 1660.3202



 quick-connect terminal 6.3 with 2 x 4.8 for separate lamp connection

### ST-SWITCHES


16 (4) A 250 V~

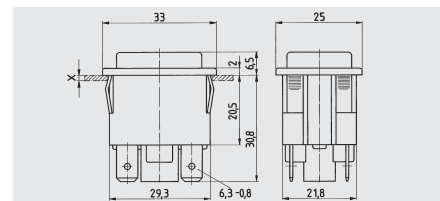
Switches for 125 V AC or 250 V AC with  and -approval marks on request



single pole  
 1662.0201





double pole  
 1661.0201\*




 quick-connect terminal 6.3

### NORMALLY OPEN-SWITCHES


16 (4) A 250 V~

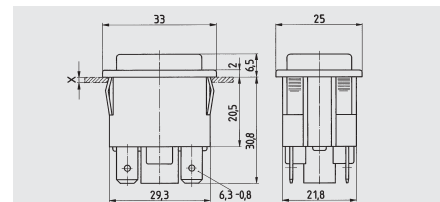
Switches for 125 V AC or 250 V AC with  and -approval marks on request



single pole  
 1662.0101\*



double pole  
 1661.0101\*



 quick-connect terminal 6.3

### DT-SWITCHES WITH MOMENTARY FUNCTION


12 (4) A 250 V~  $\mu$

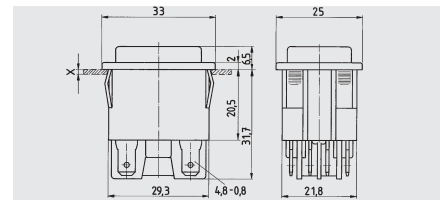
DT-switches on request



single pole  
 1664.0101



double pole  
 1663.0101



 quick-connect terminal 4.8



\* Version on stock

# SERIES 1660 - POWERFUL SINGLE POLE AND DOUBLE POLE

## PUSH BUTTON SWITCHES UP TO 16 (4) A 250 V~

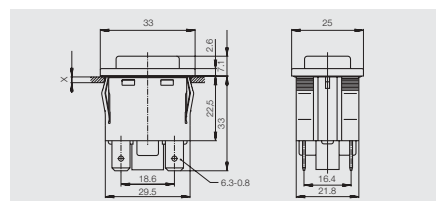
### DOUBLE POLE ST-SWITCHES

with dust and water proofing according to IP 54

Switches with - and -approval marks on request.




double pole  
☞ 1671.5201\*



☞ quick-connect terminal 6.3

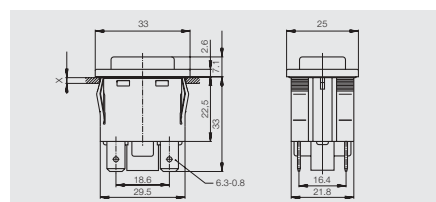
### DOUBLE POLE ST-SWITCHES

with indicator lamp and dust and water proofing according to IP 54

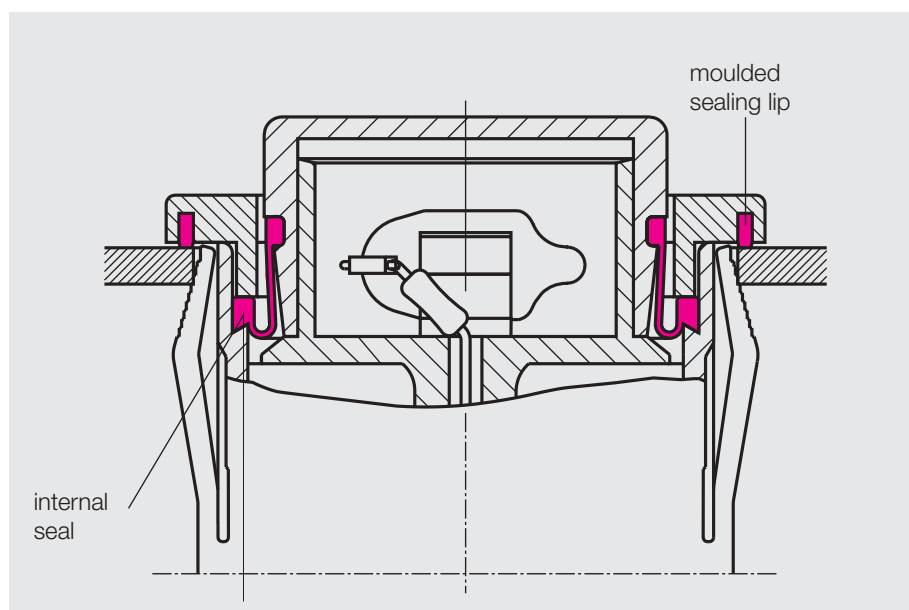
Switches with - and -approval marks on request.



double pole  
☞ 1670.5202\*



☞ quick-connect terminal 6.3



### PILOT LIGHTS 1660

Pilot light with neon lamp and resistor for 230 V~, protection type IP 40



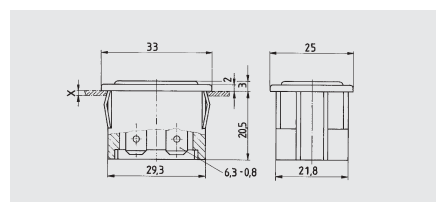
Pilot light for 125 V AC on request



☞ 1667.0101



☞ 1667.0102\*



☞ quick-connect terminal 6.3

# SERIES 4021 - DOUBLE POLE SLIDE SWITCHES FOR 2 (0,5)A 250V~ AND 5 A 250 V~ RESP. 10 A 125 V~ FOR CURRENTLESS SWITCHING



## PRODUCT ADVANTAGES

- ◆ Suited as voltage selectors (for currentless switching!)
- ◆ Slide sunken to protect against accidental actuation
- ◆ Simple assembly with screws

## SWITCHING FUNCTIONS


- ◆ DT-switch

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 2.8 mm
- ◆ Solder terminal
- ◆ Straight PC-terminal
- ◆ Angled PC-terminal

## VERSIONS ON REQUEST

- ◆ With tinned and sealed PC-terminals (for flow soldering)
- ◆ Single pole versions in the same size
- ◆ Four pole switches
- ◆ With lateral PC-terminals

Electrical rating	2 (0,5) A 250 V~
Electrical rating for currentless switching	5 A 250 V~ 10 A 125 V~
Mechanical life endurance	1E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 250
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	terminal side: -20 °C ... +85 °C no condensation actuating side: -20 °C ... +55 °C no condensation
Storage temperature	-40 °C ... +80 °C
Flammability push button and housing	UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material push button and housing	PA
Contacts	CuAg
Terminals	silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Push-on force of connectors	≤ 60 N
Approval marks	
Suitable for appliances of protection class II	

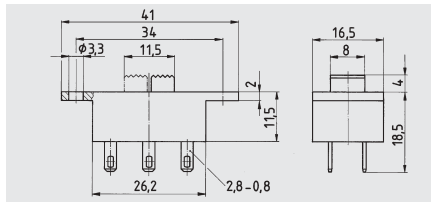
The test conditions comply with EN 61058-1 and UL 1054

# SERIES 4021 - DOUBLE POLE SLIDE SWITCHES FOR 2(0,5)A 250V~ AND 5 A 250 V~ RESP. 10 A 125 V~ FOR CURRENTLESS SWITCHING

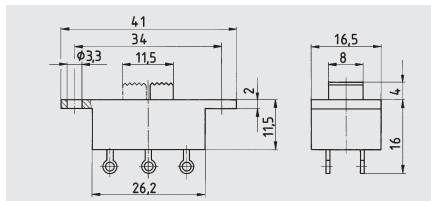
## DOUBLE POLE DT-SWITCHES



4021.0801  
4021.0101\*



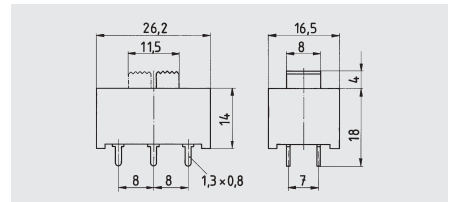
quick-connect terminal 2.8



solder terminal



4021.1811  
4021.4420\*



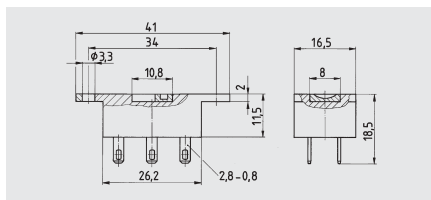
PC terminal

## DOUBLE POLE DT-SWITCHES

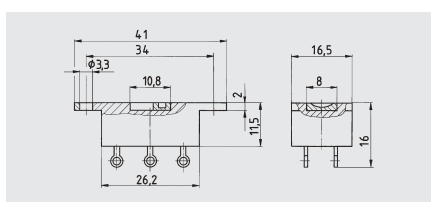
with marking 230 V / 115 V



4021.0512\*  
4021.0203



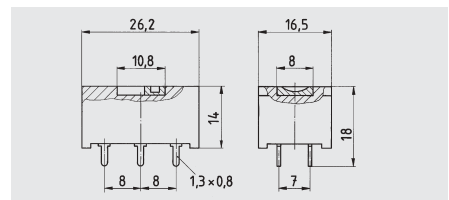
quick-connect terminal 2,8



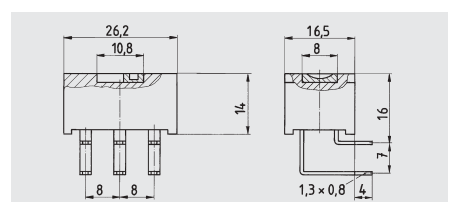
solder terminal



4021.4620\*  
4021.4723\*



PC-terminal



angled PC-terminal



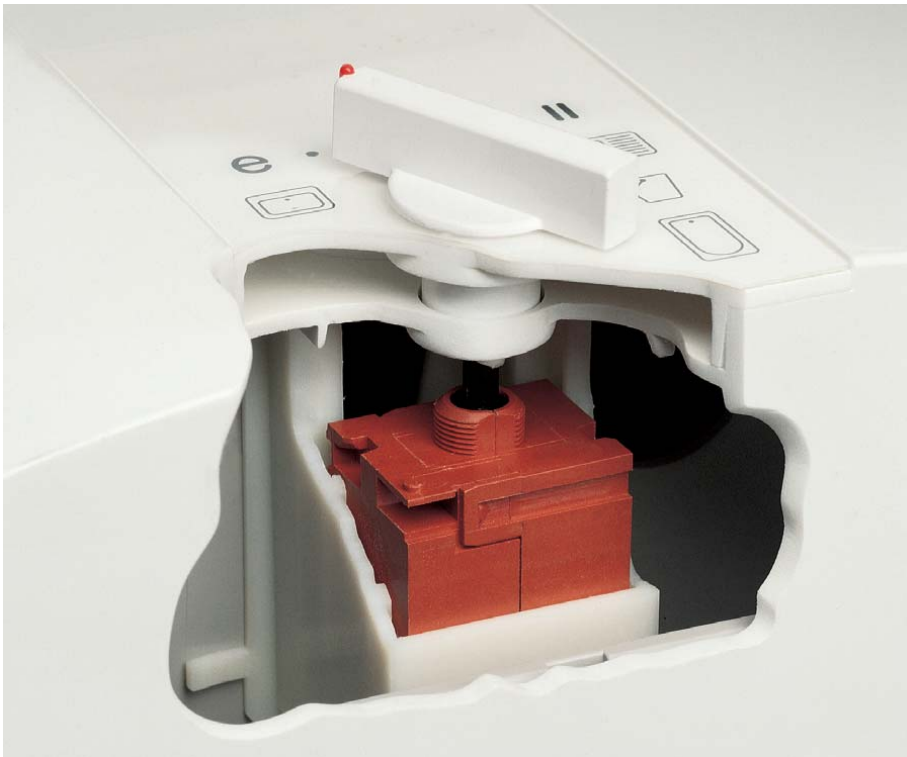
---

# SERIES 1703 - POWERFUL ROTARY SWITCHES

---

UP TO 20 (4) A 400 V~

---



---

## PRODUCT ADVANTAGES

- ◆ Powerful rotary switches up to 20(4)A 400V~, for example in ovens, flow heaters or as selector switches for speed controls and temperature adjustments
- ◆ 60° switching angle
- ◆ Creep path and air gap  $\geq 8$  mm, therefore suitable for mains and touchable low voltages
- ◆ Forced contact opening
- ◆ Fixed with M12 thread or bayonet catch (both with integrated anti-twist)

---

## SWITCHING FUNCTIONS

- ◆ ST-switch

---

## TERMINAL VERSIONS

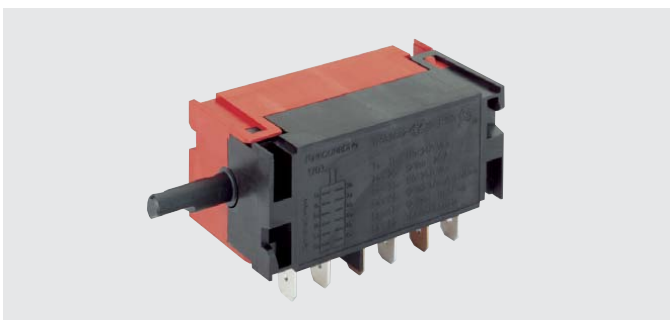
- ◆ Quick-connect terminal 6.3

---

## VERSIONS ON REQUEST



- ◆ Single pole up to four pole switches
- ◆ With PC-terminals
- ◆ With soldered stranded wires
- ◆ With additional switching sequences
- ◆ For higher electrical ratings
- ◆ With gold-plated contacts

Customized version

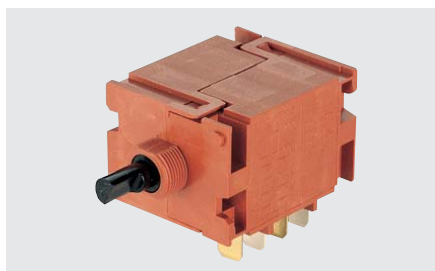


# SERIES 1703 - POWERFUL ROTARY SWITCHES


UP TO 20 (4) A 400 V~

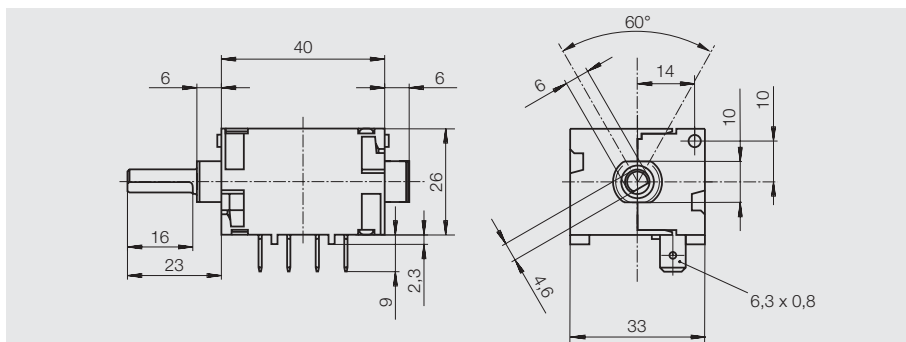
Electrical rating	20 (4) A 400 V~ 16 A 12 V DC 8 A 24 V DC
Mechanical life endurance	3E4
Contact resistance (new state)	< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)	> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	1250 V eff. (between the open contacts) 3750 V eff. (reinforced insulation)
Resistance to tracking	PTI 400
Contact gap	≥ 3 mm
Insulation spacing	≥ 8 mm
Protection type	IP 40
Ambient temperature	-20 °C ... +100 °C no condensation
Storage temperature	-40 °C ... +80 °C
Flammability	Housing UL 94 V-0 Shaft UL 94 V-2
Heat and fire-resistance	850 °C (category D)
Material housing and shaft	PA
Contacts	Ag
Terminals	CuZn resp. silver-plated
Temperature rise at the terminals (according to electrical life endurance)	max. 55 K (EN 61058-1)
Push-on force of connectors	≤ 80 N
Approval marks	 or 
Suitable for appliances of protection class II	

The test conditions comply with EN 61058-1



double pole / switching position 0-I

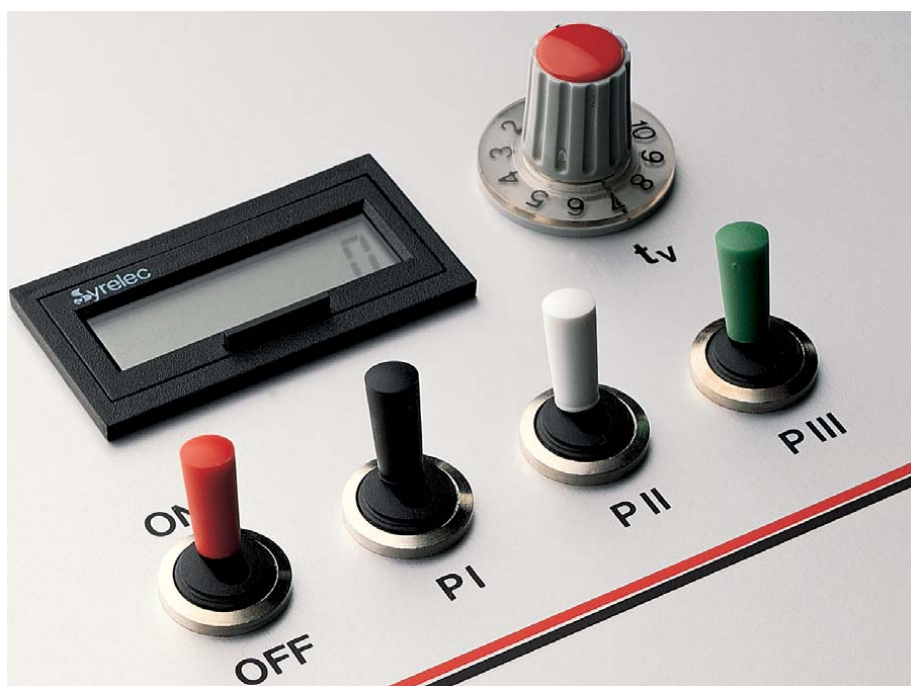
 1703.3201



 quick-connect terminal 6.3

# SERIES 1810 / 1820 - SINGLE POLE AND DOUBLE POLE TOGGLE

SWITCHES UP TO 10(4) A 250 V~



## PRODUCT ADVANTAGES

- ◆ Switching principle with long life endurance due to a low friction contact system (ball), proven a 100 million times
- ◆ Excellent actuation characteristic
- ◆ Simple assembly of the series 1820 due to round appliance cut-out and screw fastening
- ◆ Staked terminals for reliable plugging of connectors

## SWITCHING FUNCTIONS

- ◆ ST-switch
- ◆ DT-switch
- ◆ DT-switch with centre-OFF

## TERMINAL VERSIONS

- ◆ Quick-connect terminal 4.8
- ◆ Solder terminal
- ◆ Straight PC-terminal

## ACCESSORIES

- ◆ Protection caps against dust and splash water (see page **2.48**)
- ◆ Tubular push-on covers for colour coding of the individual switches (see page **2.48**)

# SERIES 1810 / 1820 - SINGLE POLE AND DOUBLE POLE TOGGLE

## SWITCHES UP TO 10 (4) A 250 V~

### STANDARD VERSION 1810

single pole and double pole



single pole

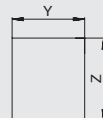
X = panel thickness



X	Y	Z
0.75...1.25	19.2 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>
1.25...2	19.4 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>
2 ...3	19.8 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>

double pole

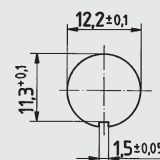
X = panel thickness



X	Y	Z
0.75...1.25	19.2 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>
1.25...2	19.4 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>
2 ...3	19.8 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>

### STANDARD VERSION 1820

single pole and double pole





Electrical rating		10 (4) A 250 V~ 6 (4) A 250 V~ 5E4  6 A 125 - 250 V AC 1/4 HP 125 V AC 1/2 HP 250 V AC
Mechanical life endurance	ST/DT	1E5
	DT with centre-OFF	5E4
Contact resistance (new state)		< 100 mΩ (12 V, 1A DC)
Insulation resistance (new state)		> 100 MΩ (500 V DC between the open contacts)
High voltage resistance (new state)	< 3 mm ≥ 3 mm	750 V eff. (between the open contacts) 1250 V eff. (reinforced insulation) 3750 V eff. (reinforced insulation)
Resistance to tracking		PTI 250
Contact gap		≥ 3 mm
Insulation spacing		≥ 8 mm
Protection type		IP 40
Ambient temperature	terminal side actuating side	-20 °C ... +100 °C no condensation -20 °C ... + 55 °C no condensation
Storage temperature		-40 °C ... +80 °C
Flammability toggle and housing		UL 94 V-2
Heat and fire-resistance		850 °C (category D)
Material toggle and housing		PA
Contacts		Ag
Terminals		silver-plated
Temperature rise at the terminals (according to electrical life endurance)		max. 30 K (UL 1054) max. 55 K (EN 61058-1)
Push-on force of connectors		≤ 80 N
Approval marks		
Suitable for appliances of protection class II		

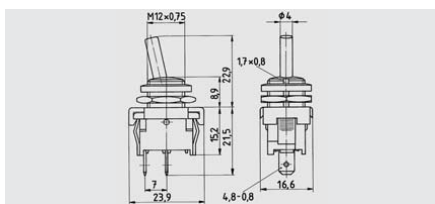
The test conditions comply with EN 61058-1 and UL 1054

### ST-SWITCHES SERIES 1820

6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC





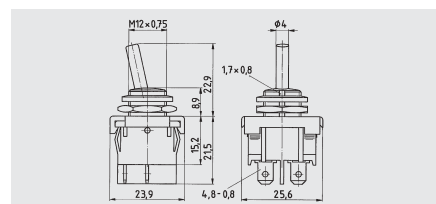
single pole  
 1821.1101\*  
 1821.0101\*



 quick-connect terminal 4.8





double pole  
 1822.1101\*  
 1822.0101\*




 quick-connect terminal 4.8

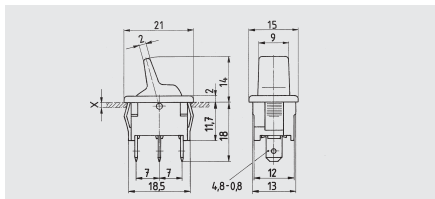
### ST-SWITCHES SERIES 1810

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC

Switches with  and -approval marks for 10 A on request.




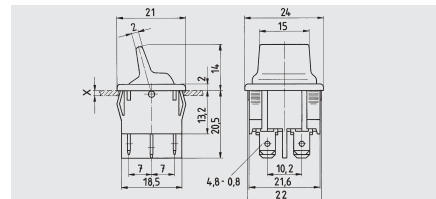
single pole  
 1811.1102\*



 quick-connect terminal 4.8



double pole  
 1812.1102\*



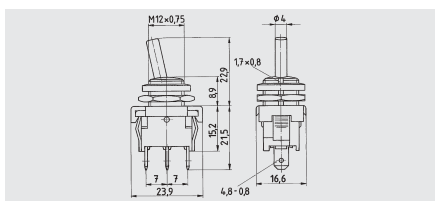
 quick-connect terminal 4.8

### DT-SWITCHES SERIES 1820

6 (4) A 250 V~ 5E4  
 T 100/55





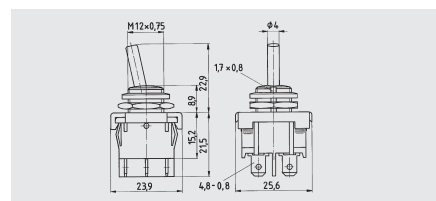
single pole  
 1823.1101\*  
 1823.0101\*



 quick-connect terminal 4.8



double pole  
 1824.1101\*  
 1824.0101



 quick-connect terminal 4.8



\* Version on stock

# SERIES 1810 / 1820 - SINGLE POLE AND DOUBLE POLE TOGGLE


## SWITCHES UP TO 10 (4) A 250 V~

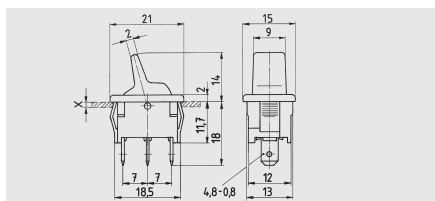
### DT-SWITCHES SERIES 1810

10 (4) A 250 V~  
 6 (4) A 250 V~ 5E4  
 T 100/55  
 6 A (1/4 HP) 125 V AC  
 6 A (1/2 HP) 250 V AC

Switches with  and -approval marks for 10 A on request.




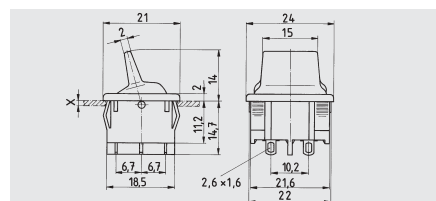
single pole  
 1813.1102\*



 quick-connect terminal 4.8



double pole  
 1814.0102



 solder terminal




### DT-SWITCHES SERIES 1820

with centre-OFF




6 (2) A 250 V~  $\mu$   
 T 100/55

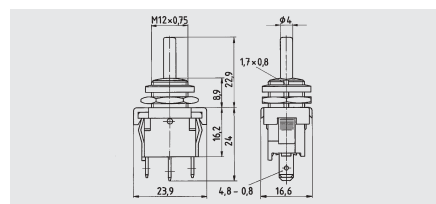
Momentary on one side function on request



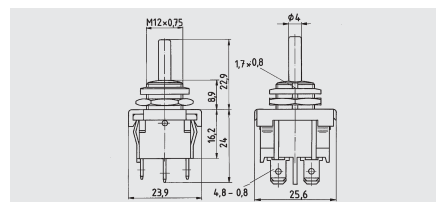
single pole without momentary  
 1828.1101\*  
 1828.0101\*  
 momentary on both sides  
 1828.1301



double pole without momentary  
 1829.1101  
 1829.0101  
 momentary on both sides  
 1829.1301



 quick-connect terminal 4.8



 quick-connect terminal 4.8



### DT-SWITCHES SERIES 1810

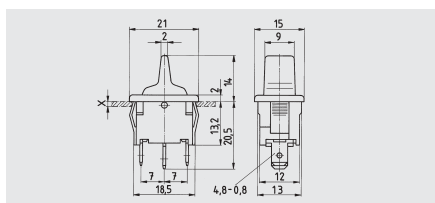
with centre-OFF

6 (2) A 250 V~  $\mu$   
 T 100/55  
 6 A (1/8 HP) 125-250 V AC

Momentary on one side on request





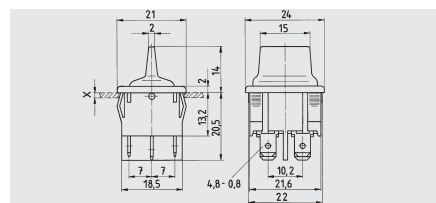
single pole without momentary  
 1818.1102\*  
 momentary on both sides  
 1818.1302\*



 quick-connect terminal 4.8



double pole without momentary  
 1819.1102  
 momentary on both sides  
 1819.1302\*



 quick-connect terminal 4.8


# SERIES 2410 - FOOT SWITCHES UP TO 6 (2,5) A 250 V~



## PRODUCT ADVANTAGES

- ◆ For ratings up to 6 (2,5) A 250 V~
- ◆ Ergonomical dimensions allow actuation without tiring
- ◆ Long life endurance
- ◆ Distinct actuation characteristic
- ◆ Retrofittable cable
- ◆ Retrofittable protection hood

## TECHNICAL DATA

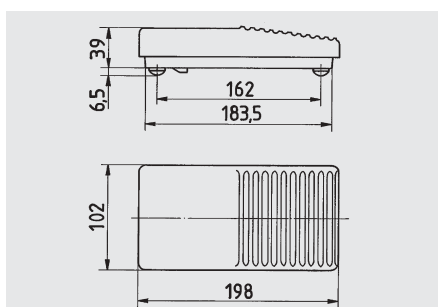
- ◆ Mechanical life endurance 3E5
- ◆ Resistance to tracking PTI 250
- ◆ Foot tread and housing made of PA
- ◆ Contacts Ag
- ◆ 

single pole  
contact gap < 3 mm



Normally open 2410.0301\*      DT momentary 2410.0401\*

with terminal strip and strain relief clip in the housing



double pole  
contact gap > 3 mm



Normally open 2410.1001

with three-core cable connection, earthing-plug and -linkage  
length: to mains supply 3000 mm  
to appliance 250 mm

\* Version on stock

# ACCESSORIES FOR THE APPLIANCE SWITCHES

## PROTECTION CAPS

When mounted in the appliance, the actuation side of the switch is dust-tight and protected against splash water.



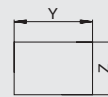
203 089 011\*

suitable for the series

1800. 1855.  
1801. 1858.  
1803.  
1808.

### appliance cut-out single pole

X = panel thickness



X	Y	Z
0.75...1.25	19.4 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>
1.25...2.2	19.8 <sup>-0.1</sup>	12.9 <sup>+0.1</sup>



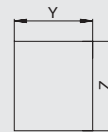
203 090 011\*

suitable for the series

1802.  
1804.  
1805.  
1809.

### appliance cut-out double pole

X = panel thickness



X	Y	Z
0.75...1.25	19.4 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>
1.25...2.2	19.8 <sup>-0.1</sup>	21.9 <sup>+0.1</sup>

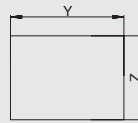


203 201 011\*

suitable for the series

1832. 1661.  
1834. 1662.  
1835. 1663.  
1839. 1664.  
1665.  
1667.

X = panel thickness



X	Y	Z
0.75...1.4	30.2 <sup>-0.1</sup>	22.0 <sup>+0.2</sup>
1.4...2.4	30.6 <sup>-0.1</sup>	22.0 <sup>+0.2</sup>

### appliance cut-out with protection cap

## TUBULAR PUSH-ON COVERS

These push-on covers are appropriate for a better marking of plastic levers especially of the series 1820.

Additional colours on request.



203 105 011\*



203 105 031

## PROTECTION CAP

This cap protects the installed switch against dust and splash water from the actuation side.



343 001 023\*