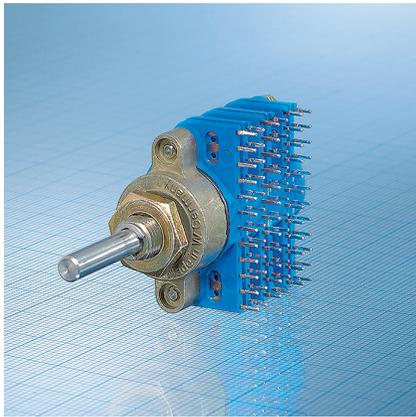


## Miniature Rotary Switch SBL17, watertight



Miniature switch washable in ultrasonic bath.

- Direct soldering to PCB according to DIN IEC 68, part 2-20. Processing as for other electronic components.
- Insensitive to external influences, such as severe atmospheric conditions, dust, etc.
- Wafers adjustable in 2,54 mm steps.
- 1–4 circuits per wafer.
- 1–6 wafers per switch.
- Switching mode shorting or non-shorting.
- High quality materials guaranteeing long life.
- Special designs
  - Watertight against front panel with thread M10x0,75 and shaft diameter 6 mm.
  - Watertight against front panel to 0,2 bar with 1,3 mm thick sealing washer, thread M7, or O-Ring, thread M10.
  - Shaft diameter 6,35 mm possible.
  - Version according MIL 3786 and VG 95318.
  - Distance between the individual wafers is variable in 2,54 mm gradings.

### 1.0 Construction

1.1 Number of wafers max.	6 wafers
1.2 Switching combinations per wafer Design E, detent angle 30°	1x12 to 1x2; 2x6 to 2x2; 3x4 to 3x2 4x3 to 4x2; 6x2 to 2x2
1.3 Contacts	Soldering pins
1.4 Mounting	Soldering and central mounting

### 2.0 Electrical Data

	Ag-version	Au-version
2.1 Switching power max.	5 VA/W	3 VA/W
2.2 Switching voltage max.	125 V~/150 V–	60 V≈
2.3 Switching current max.	200 mA	100 mA
2.4 Rest current max. at $\partial u$ 20°C	$\leq 0,5A$	$\leq 0,5A$
2.5 Test voltage at 50 Hz	1000 V	1000 V
2.6 Life expectancy	without power with max. power	$\geq 20\ 000$ cycles $\geq 10\ 000$ cycles
2.7 Contact resistance	initial value after life	$\leq 40\ m\Omega$ $\leq 80\ m\Omega$
2.8 Insulation resistance	$\geq 10^{11}\ \Omega$	$\geq 10^{11}\ \Omega$
2.9 Capacity between 2 contacts Capacity between contact and ground	$\leq 1,5\ pF$ $\leq 4,6\ pF$	$\leq 1,5\ pF$ $\leq 4,6\ pF$

### 3.0 Mechanical Data

3.1 Switching mode <sup>1)</sup>	Shorting or non-shorting
3.2 Stops	Fixed or without stop
3.3 Operating torque acc. to design	4 to 20 Ncm
3.4 Stop strength	$\geq 100\ Ncm$
3.5 Fastening torque max.	70 Ncm at M7; 150 Ncm at M10
3.6 Vibratory strength	10 g, 10–500 Hz
3.7 Shock strength	50 g, 11 ms
3.8 Dust protection	Sealed wafer
3.9 Watertight against front panel <sup>2)</sup>	Dip proof up to 0,2 bar
3.10 Cleaning <sup>3)</sup>	Complete immersion in ultrasonic bath

1) With non-shorting switching mode only those contacts on the side turned away from the detent mechanism of each switching wafer are non-shorting. Both contact sides of each wafer non-shorting as special design.

2) Sealing disk 1,3 mm at thread M7, O-Ring at thread M10 as special design.

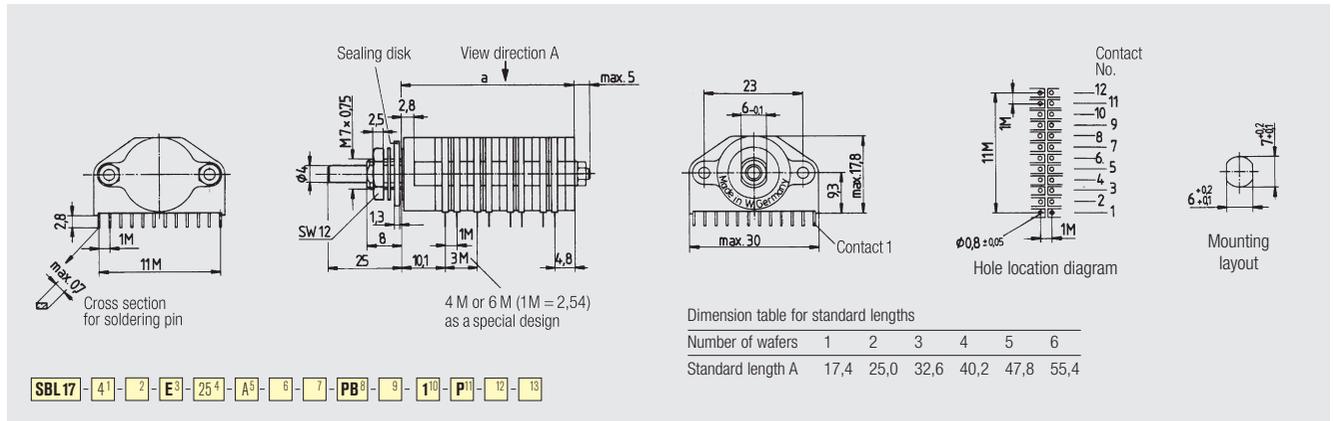
3) With known agents such as freon, arclone etc.

### 4.0 Other Data

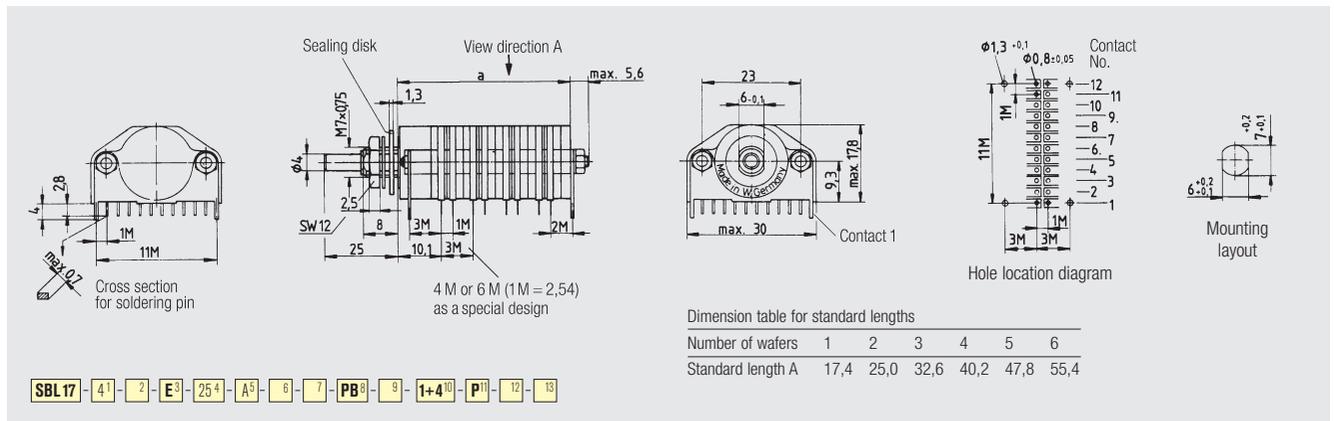
4.1 Contact material	Ag; special design Au over Ni barrier layer
4.2 Insulating material	Wafer: Polybutylenenterephthalat, PBTP; code PB Rotor: Polyacetal, POM
4.3 Soldering time and temperature max.	5 s at 260°C

The bold-typed data in the yellow order blocks remain unchanged.  
 Normal-typed data match the drawings and can be modified according to your wishes.  
 Blanks need to be completed according to the ordering details on the inside front cover.

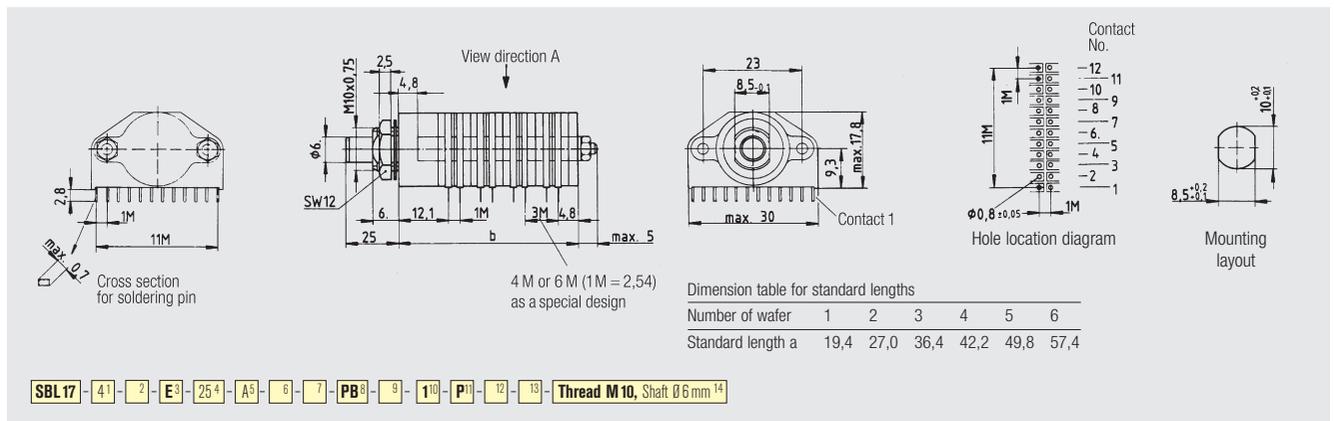
## Dimensional Drawings · Dimensions in mm



SBL17 · Standard version for central mounting



SBL17 · PCB mounting. Version for additional mounting on PCB



SBL17 · Version with insert nut M10, shaft Ø 6 mm



Proposal for PCB layout from line of view direction A