

Miniature Rotary Switch SB15



Miniature switch with 1 to 4 wafers according to DIN 41634, IEC-draft and VG 95318, part 5.

- Multi-wafer switch for conventional wiring.
- Single-wafer switch also for direct soldering to PCB or flexible printed circuits.
- Absolutely tight against flux.
- 1 to 4 circuits per wafer. Detent angle 30° or 60°.
- Shorting (k) or non-shorting (u) mode of switching.
- Watertight against front panel.
- Higher fastening torque with stainless steel bushing.

Special designs:

- Locking possibility for free selectable switch positions. The switch can only be brought into a locked switch position by pulling the axes.
- Shaft Ø 6 mm with bushing M10x0,75 or shaft Ø 6,35 mm with bushing 3/8" NEF or shaft Ø 3,17 mm with bushing 1/4" NF on request.
- Spring return version on request.
- Version in compliance with MIL 3786 and approved acc. VG 95318 standard.

1.0 Construction

1.1 Number of wafers max.	4 wafers
1.2 Switching combinations per wafer	—
Design B, detent angle 60°	1x6 to 1x2; 2x3 to 2x2; 3x2; 4x2
Design E, detent angle 30°	1x12* to 1x2; 2x6 to 2x2 3x4 to 3x2; 4x3 to 4x2
1.3 Contacts	Soldering lugs, single-wafer switch also pins
1.4 Mounting	Central mounting

* Versions with stop and shaft diameter 6 mm or 6,35 mm have only 11 switch positions max.

2.0 Electrical data

	Ag-version	Au-version
2.1 Switching power max.	10 VA/W	5 VA/W
2.2 Switching voltage max.	125 V~/150 V–	60 V≈
2.3 Switching current max.	300 mA	100 mA
2.4 Rest current max. at θ_u 20°C	≤ 1 A	≤ 1 A
2.5 Test voltage at 50 Hz	1000 V	1000 V
2.6 Life expectancy	without power with power max.	≥ 50 000 cycles ≥ 20 000 cycles
2.7 Contact resistance	initial value after life expectancy	≤ 40 mΩ ≤ 80 mΩ
2.8 Insulation resistance	≥ 10 ¹¹ Ω	≥ 10 ¹¹ Ω
2.9 Capacity	2 contacts between contact and ground	≤ 1 pF ≤ 2,5 pF

3.0 Mechanical Data

3.1 Switching mode	Shorting or non-shorting
3.2 Stops	Fixed or without stop
3.3 Operating torque acc. to design	3 to 15 Ncm
3.4 Stop strength	≥ 100 Ncm ≥ 70 Ncm for version with interlocking
3.5 Fastening torque max.	Standard 70 Ncm; MIL-version 150 Ncm
3.6 Vibratory strength	10 g, 10–2000 Hz
3.7 Shock strength	50 g, 11 ms
3.8 Dust protection	Sealed wafer
3.9 Waterproofing	Watertight against front panel up to 0,2 bar as special design

4.0 Other Data

4.1 Contact material	Ag; special design Au over Ni barrier layer
4.2 Insulation material	Wafer: Diallylphthalate, DAP; Code DI Rotor: Polyacetal, POM
4.3 Soldering time and temperature max.	5 s at 260°C 3 s at 350°C, manual soldering

Dimensional Drawings · Dimensions in mm



Technical drawing of the SB15 switch assembly, showing three views and dimensions:

- Top View (Left):** Shows the contact marking. Dimensions include a diameter of 7.01 and a contact diameter of 6.01.
- Side View (Middle):** Shows the assembly with dimensions:
 - Pin: M7x0.75, length 8, standard length L=25.
 - Contact diameter: 10.
 - Contact thickness: 0.4.
 - Assembly length: 91, max. 16.6.
 - Pin length: 1.8, 0.8, 0.2.
 - Pin diameter: 0.8.
 - Pin length: 15, 18.
 - Pin length: 3.
- Front View (Right):** Shows the contact ring with a diameter of 15 and a contact diameter of 6.01. The text "Made in W. Germany" is visible.

Labels and notes:

- Contact marking
- Optional hexagon nut SW10 or slotted nut
- Spring washer A7 DIN 137
- Sealing disk, flange or shaft seal as a special design
- Printed with: Switch type (SB15), Contact material (Au or Ag), Switching mode (k or u)
- Drawn without O-ring, spring washer and nut
- Special design with pin length 1mm for flexible pc-boards
- Mounting layout



SW10

Spring washer

Sealing disk, flange or shaft seal as a special design

2,5

25

8

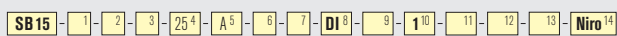
9,1

11

6

4

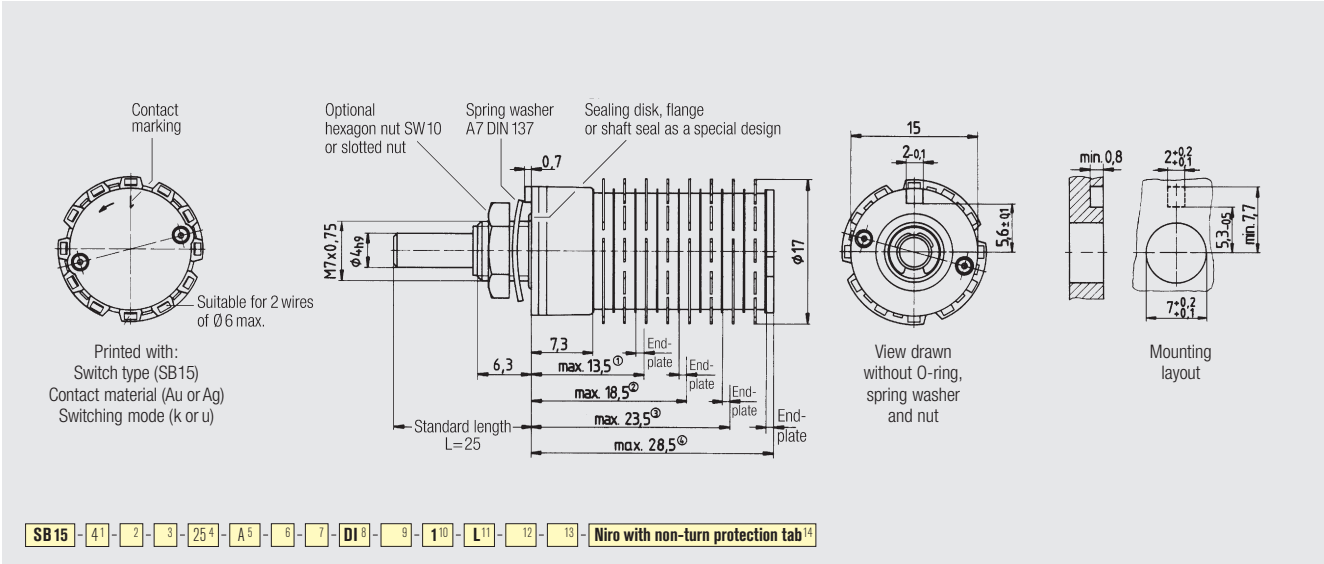
Mounting layout



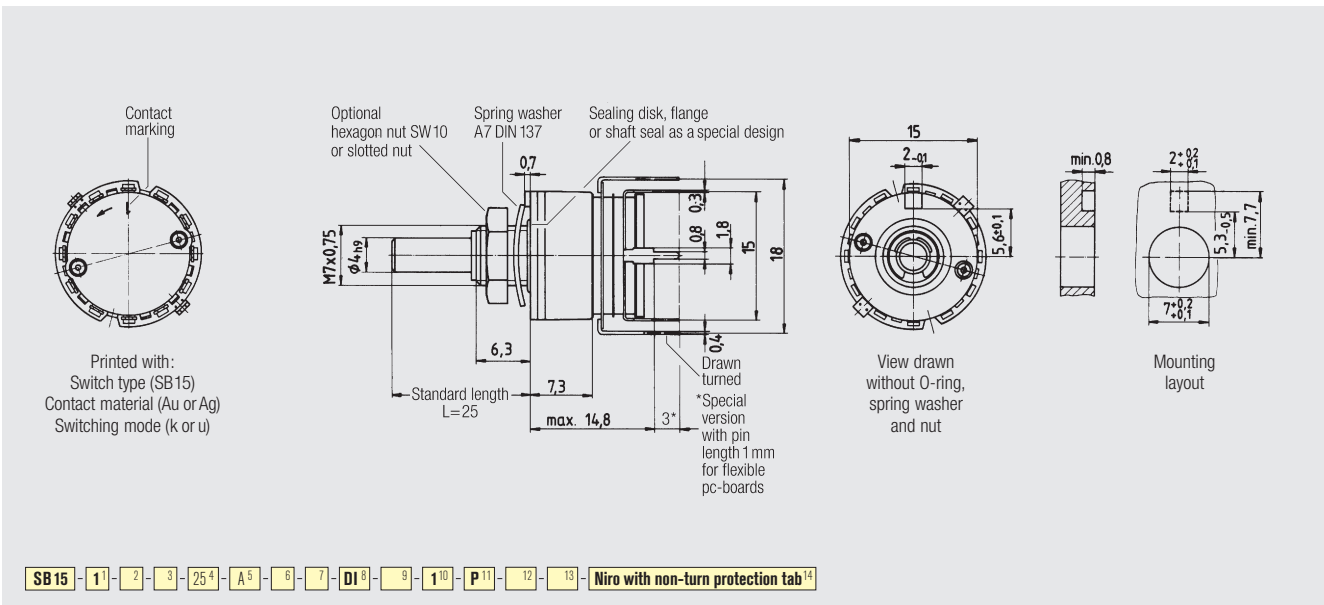
Miniature Rotary Switch SB15

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.

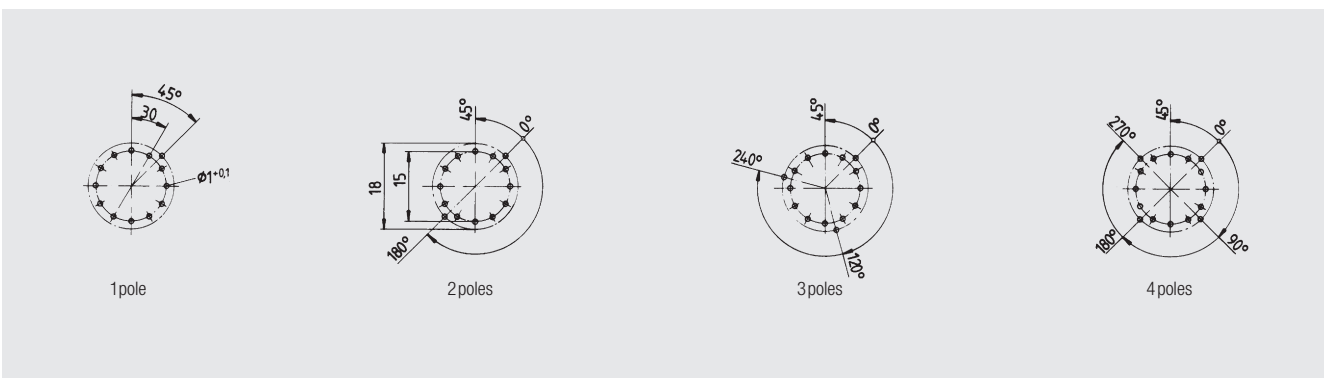
Dimensional Drawings · Dimensions in mm



SB15 with soldering lugs and stainless steel bushing and non-turn protection tab

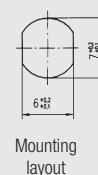
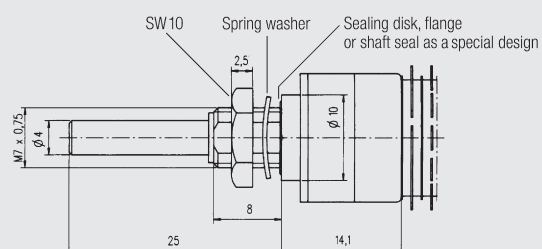


SB15 with soldering pins and stainless steel bushing



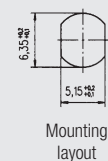
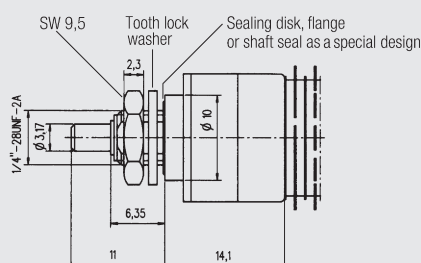
Hole location diagrams viewed from detent mechanism

Dimensional Drawings · Dimensions in mm



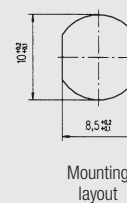
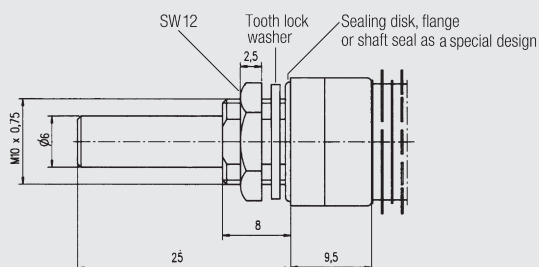
SBV15 - 1 - 2 - 3 - 25 4 - A 5 - 6 - 7 - D1 8 - 9 - 1 10 - 11 - 12 - 13 - Switching position with interlocking¹⁴

SBV15 with interlocking and thread M7x0,75 niro



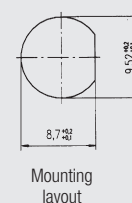
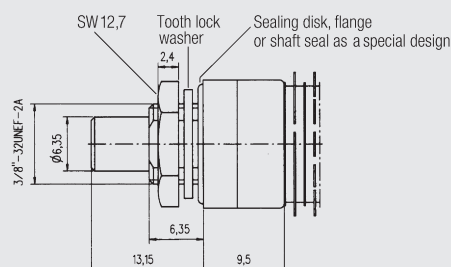
SBV15 - 1 - 2 - 3 - 11 4 - A 5 - 6 - 7 - D1 8 - 9 - 1 10 - 11 - 12 - 13 - Thread 1/4" · Shaft 1/8" · Switching position with interlocking¹⁴

SBV15 with interlocking and thread 1/4" niro



SB15 - 1 - 2 - 3 - 25 4 - A 5 - 6 - 7 - D1 8 - 9 - 1 10 - 11 - 12 - 13 - Thread M10, Shaft Ø 6 mm¹⁴

SB15 · Special version with thread M10x0,75 zinc pressure cast bushing



SB15 - 1 - 2 - 3 - 13 4 - A 5 - 6 - 7 - D1 8 - 9 - 1 10 - 11 - 12 - 13 - Thread 3/8" · Shaft 1/4" ¹⁴

SB15 · Special version with 3/8" zinc pressure cast bushing