Miniature Rotary Switch SB16, SBI16

Miniature switch for free wiring or direct soldering. According to DIN 41633 and IEC-draft.

- Suitable for MIL-S-3786C and VG 95318, explosion proof according to MIL-STD 810C, method 511, Test procedure I.
- 17 mm diameter.
- Special design available for „dry circuits".
- Dust-proof and flux-proof.

SBI 16

- Version with additional impulse contact, e.g. for testing or paging functions.

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

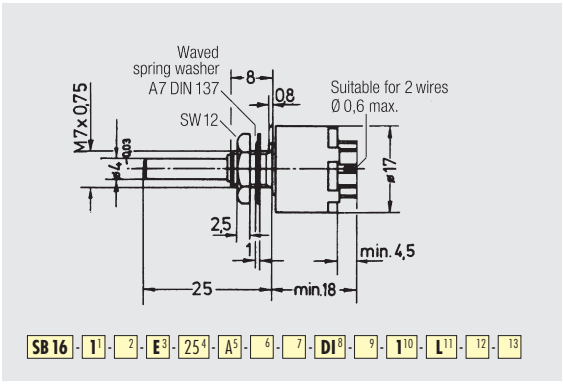
2.0 Electrical Data		Ag-version	Au-version
2.1 Switching power max.		10 VA/W	5 VA/W
2.2 Switching voltage max.		125 V~/150 V–	60 V≃
Switching voltage max. impulse contact		30 V~	30 V~
2.3 Switching current max.		350 mA	100 mA
2.4 Rest current max. at ∂u 20°C		≤ 5 A	≤ 2 A
2.5 Test voltage at 50 Hz		1000 V~	1000 V~
Test voltage impulse contact		500 V~	500 V~
2.6 Life expectancy	without power	≥ 50 000 cycles	≥ 20 000 cycles
	with power max.	≥ 20 000 cycles	≥ 10 000 cycles
2.7 Contact resistance	initial value	≤ 20 mΩ	≤ 20 mΩ
Contact resistance	without electrical load	≤ 30 mΩ	≤ 30 mΩ
after life expectancy	with electrical load	≤ 30 mΩ	≤ 30 mΩ
2.8 Insulation resistance		≥ 10^{11} Ω	≥ 10^{11} Ω
2.9 Capacity between 2 contacts		≤ 4 pF	≤ 4 pF
Capacity between contact and ground		≤ 4 pF	≤ 4 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, MIL-version 10 to 20 Ncm
3.4 Stop strength	≥ 100 Ncm standard ≥ 170 Ncm MIL-version
3.5 Fastening torque max.	70 Ncm standard 150 Ncm MIL-version
3.6 Vibratory strength	10 g, 11 ms
3.7 Shock strength	50 g, 11 ms
3.8 Dust protection	Sealed wafer
3.9 Waterproofing	MIL-version watertight against front panel up to 0,2 bar

4.0 Other Data		
4.1 Contact material		Ag; special version Au over Ni barrier layer
4.2 Insulating 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

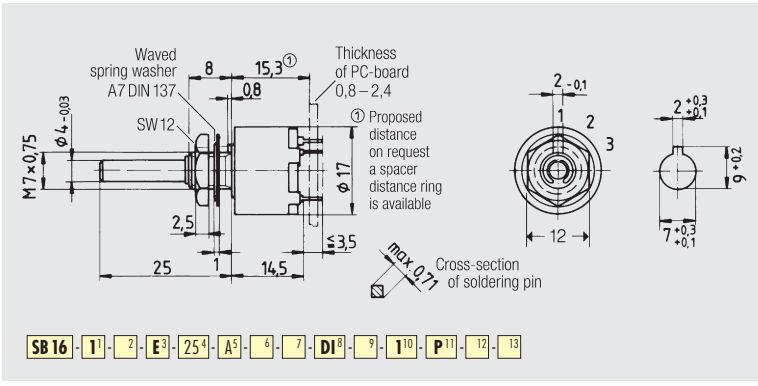
The bold-typed data in the yellow order blocks remain unchanged.
Normal-typed data match the drawings and can be modified according to your wishes.
Blanks need to be completed according to the ordering details on the inside front cover.

Dimensional Drawings and Contact Arrangements · Dimensions in mm



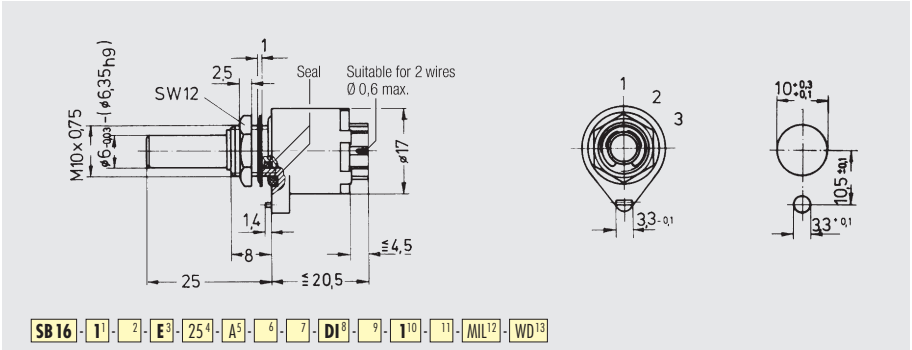
SB 16 · 1 · 2 · E 3 · 25 4 · A 5 · 6 · 7 · DI 8 · 9 · 1 10 · L 11 · 12 · 13

SB 16 · Standard version with soldering lugs



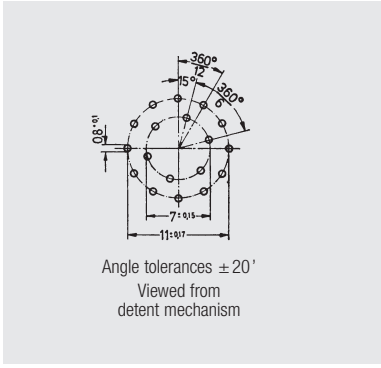
SB 16 · 1 · 2 · E 3 · 25 4 · A 5 · 6 · 7 · DI 8 · 9 · 1 10 · P 11 · 12 · 13

SB 16 Standard version with soldering pins

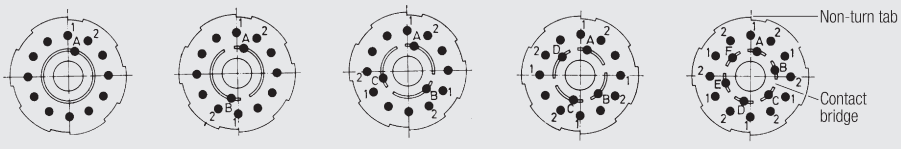


SB 16 · 1 · 2 · E 3 · 25 4 · A 5 · 6 · 7 · DI 8 · 9 · 1 10 · 11 · MIL 12 · WD 13

SB 16 · MIL-version, shaft design A

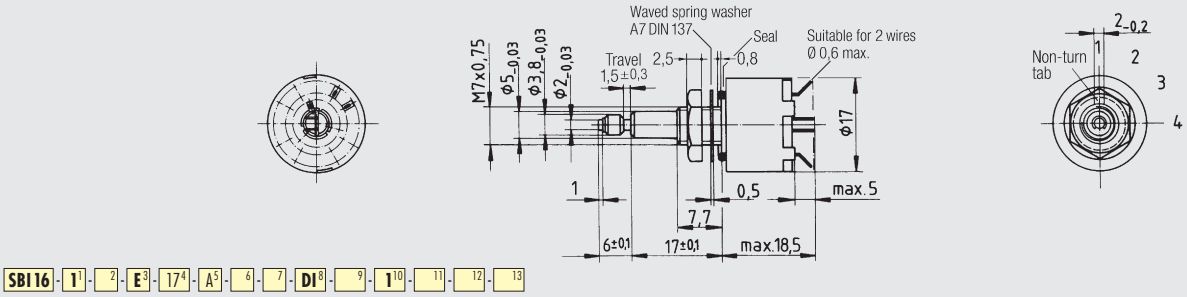


Contact arrangement for printed circuits



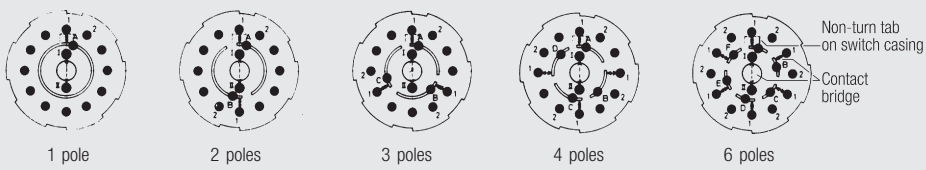
1, 2… Contact-No.
A, B… Lead-in contacts
Available in shorting
or non-shorting switching modes

SB 16 · Contact arrangements as viewed from detent mechanism



SBI 16 · 1 · 2 · E 3 · 17 4 · A 5 · 6 · 7 · DI 8 · 9 · 1 10 · 11 · 12 · 13

SBI 16 · Step switch with impulse contact



1, 2… Contact-No.
A, B… Lead-in contacts
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SBI 16 · Contact arrangements as viewed from detent mechanism