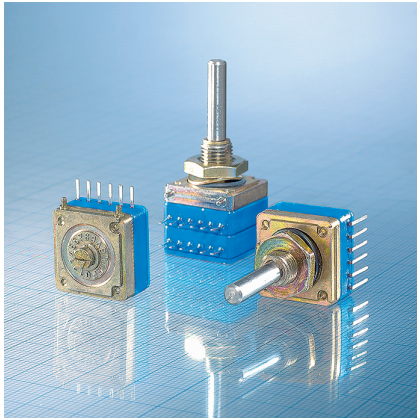


Miniature Code Switch SC17, watertight



Multi-purpose miniature code switch with many standard codes and detent angle variations.

- Standard codes:
 - BCD with even parity.
 - BCD with even parity and direct control of 7 segment displays.
 - BCD-complement: 2 out of 5, Excess 3, Gray, Aiken, Dezimal 0–9 (1 out of 10) and hexadecimal.
 - Further codes on request.
- Suitable for cleaning in ultrasonic bath.
- Same construction enables to use code switches and step switches (1 out of 10) together.
- Direct control of 7 segment displays simplifies the switching arrangement.
- Miniature dimensions: 17,0x17,0x11,4 mm – 1 wafer.
- Direct soldering to PC boards.
- Shaft parallel or vertical to PC board (single-wafer version).
- Operating by shaft or screwdriver slot.
- Very long life-expectancy.

Special versions

- Type SCM 17 approved acc. to VG 0095 318 T13.
- Version with self-returning detent mechanism on request.
- Version with thread M10 x 0,75 and shaft 6 mm.
- Type SCD 17, detent angle 36°, with 2 wafers to be operated independently. Wafer 1 operated in normal shaft position, Wafer 2 operated by pushing the shaft. After operation the switch returns to normal position.

1.0 Construction

1.1 Number of wafers max.	3 wafers
1.2 Switching combinations per wafer	Code on request
Design B, detent angle 60°	
Design D, detent angle 36°	See code tables
Design E, detent angle 30°	Code on request
Design H, detent angle 22,5°	See code tables
Design N, detent angle 18°	Code on request
1.3 Contacts	Soldering pins
1.4 Mounting	Soldering, holding clamps or central mounting

2.0 Electrical Data

2.1 Switching power	3VA/W max. 5 · 10 ⁻⁷ W min.
2.2 Switching voltage	30 V \approx max. 10 mV \approx min.
2.3 Switching current	100 mA max. 50 μ A min.
2.4 Rest current max. at ∂u 20°C	0,5A
2.5 Test voltage at 50 Hz	100 V
2.6 Life expectancy	without electrical load \geq 50 000 cycles
	with power max. \geq 20 000 cycles
2.7 Contact resistance	initial value \leq 100 m Ω
	after life expectancy with electrical load \leq 200 m Ω
2.8 Insulation resistance	\geq 10 ¹⁰ Ω
2.9 Capacity between 2 contacts	\leq 2 pF
	Capacity between contact and ground \leq 2 pF

3.0 Mechanical Data

3.1 Stops	Fixed or without stop
3.2 Operating torque	3 bis 10 Ncm
3.3 Stop strength	\geq 70 Ncm
3.4 Vibratory strength	10 g, 10–500 Hz
3.5 Shock strength	50 g, 11 ms
3.6 Waterproofing	Watertight against front panel up to 0,2 bar
3.7 Cleaning*	Complete immersion in ultrasonic bath

* With known agents as Freon, Arklone etc.

4.0 Other Data

4.1 Contact material		Au
4.2 Insulating material	Wafer	Polybutylenterephthalate, PBTP; Code PB
	Rotor	Epoxide glass laminate, EP
4.3 Soldering time and temperature max.		5 s at 260°C

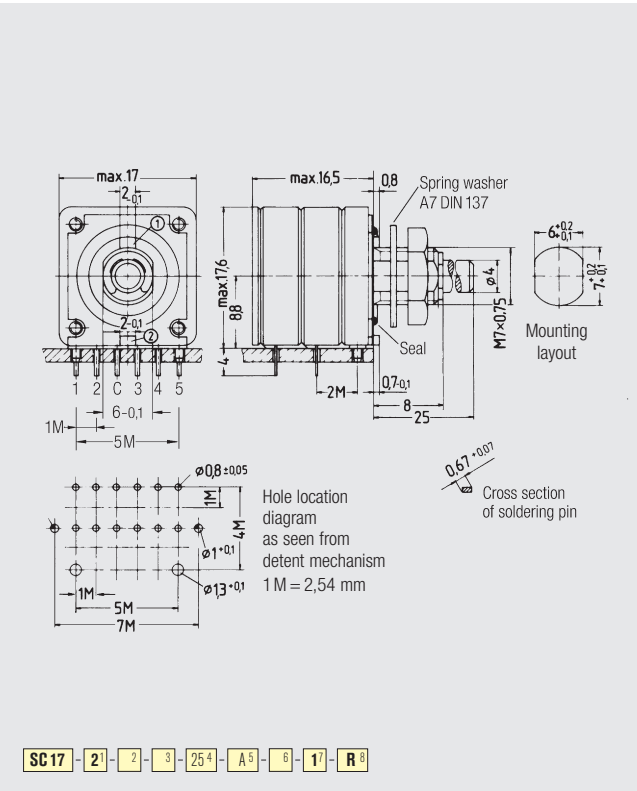
Ordering Codes

Designation of type	SC 17
1. Number of wafers	1, 2 or 3
2. Code	31, 52, 54, 56, 61, 71, 72 or 75
3. Distribution over 360°	10 or 16
4. Shaft length	in mm
5. Shaft design	A = Standard, D = Turn-screw version
6. Switching limit	00 = without stop (limit to XX positions)
7. Operating mode	1 = Central mounting, 4 = Soldering pins
8. Direction of contacts	A = axial, R = radial

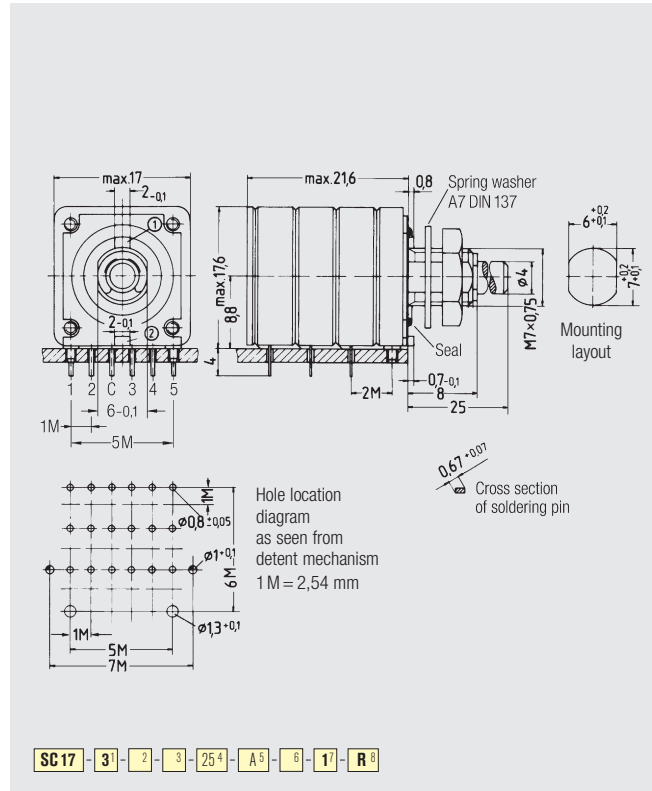
Miniature Code Switch SC17, watertight

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 page 52.

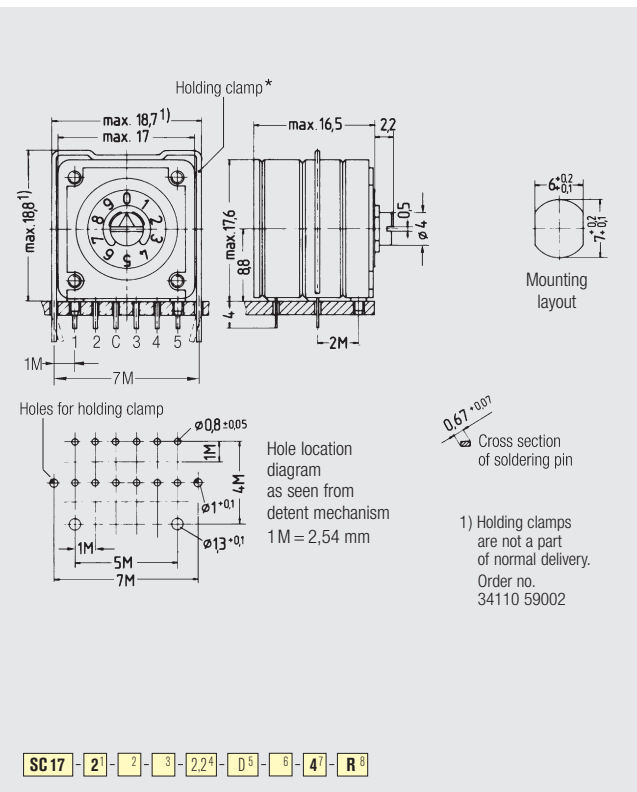
Dimensional Drawings · Dimensions in mm



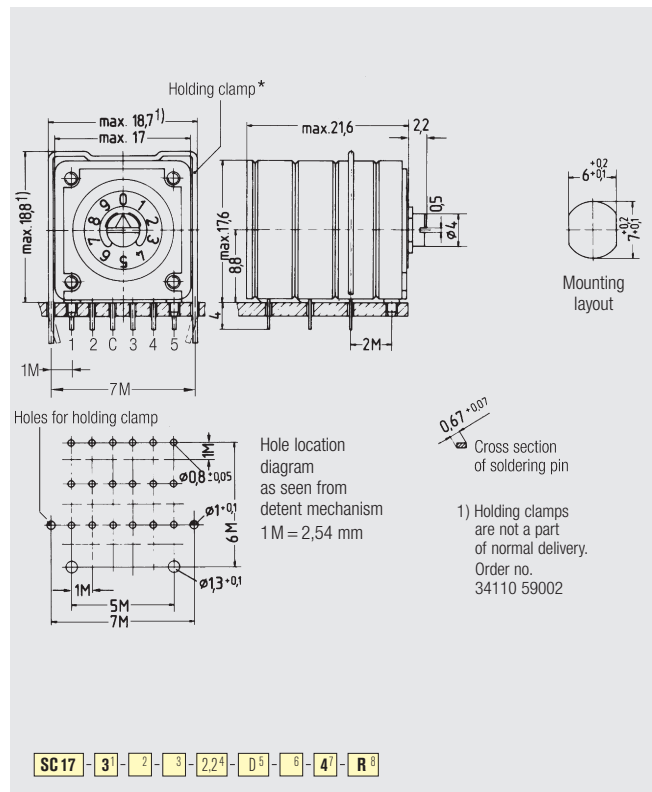
SC17 · Shaft version with 2 wafers. Radial mounting



SC17 · Shaft version with 3 wafers. Radial mounting



SC17 · Screwdriver slot version with 2 wafers. Radial mounting

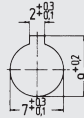


SC17 · Screwdriver slot version with 3 wafers. Radial mounting

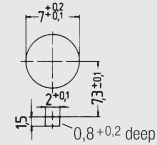
Dimensional Drawings and Codes · Dimensions in mm



Standard version



Special version for non-turn protection tab



Special version with non-turn protection tab
Distance 7,3 mm

SC17 · Mounting layouts for non-turn protection versions

31	C connected with									
	1st bank				2nd bank					
	0	1	2	3	4	5	6	7	8	9
0	●									
1		●								
2			●							
3				●						
4					●					
5						●				
6							●			
7								●		
8									●	
9										●

Code 31
Decimal 0 to 9

52	C connect- ed with							
	1	2	4	8				
0	●	●	●	●				
1	●	●	●	●				
2	●	●	●	●				
3	●	●	●	●				
4	●	●	●	●				
5	●	●	●	●				
6	●	●	●	●				
7	●	●	●	●				
8	●	●	●	●				
9	●	●	●	●				

Code 52
BCD - Complement

54	C connect- ed with					
	1	2	4	8	P	
0						
1	●				●	
2		●				●
3	●		●			
4		●		●		
5	●		●		●	
6		●		●		●
7	●		●		●	
8		●		●		●
9	●		●		●	

Code 54
BCD + even parity

56	C connected with											
	1st bank				2nd bank				3rd bank			
	1	2	4	8	P	a	b	c	d	e	f	g
0												●
1	●					●	●	●	●	●	●	●
2		●								●	●	●
3	●		●								●	●
4		●		●						●	●	●
5	●		●		●						●	●
6		●		●		●					●	●
7	●		●		●		●				●	●
8		●		●			●				●	●
9	●		●		●						●	●

Code 56
BCD + even parity
+ 7 segment

61	C connect- ed with			
	1	2	4	8
0				
1	●			
2		●		
3	●		●	
4		●		●
5	●		●	
6		●		●
7	●		●	
8		●		●
9	●		●	
A	●		●	
B		●		●
C	●		●	
D		●		●
E	●		●	
F		●		●

Code 61
Hexadecimal

71	C connect- ed with			
	a	b	c	d
0		●		
1			●	
2	●		●	
3		●		●
4			●	
5	●		●	
6		●		●
7	●		●	
8		●		●
9	●		●	

Code 71
Excess 3,
Gray

72	C connect- ed with			
	1	2	4	2
0				
1	●			
2		●		
3	●		●	
4		●		●
5	●		●	
6		●		●
7	●		●	
8		●		●
9	●		●	

Code 72
Aiken

75	C connect- ed with				
	a	b	c	d	e
0	●	●			
1	●		●		
2	●	●		●	
3	●		●		●
4	●	●		●	
5	●		●		●
6	●	●		●	
7	●		●		●
8	●	●		●	
9	●		●		●

Code 75
2 of 5

For switches with two or three differently coded wafers, please specify code numbers successively starting with the first wafer after detent mechanism.