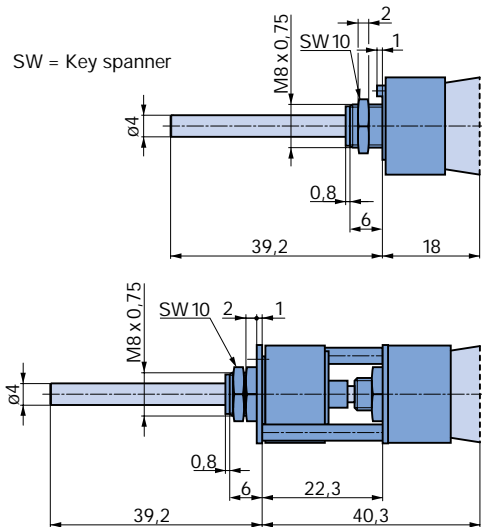


Rotary Switches Type 01

- 12 position switch
- life expectancy > 25 000 switching cycles
- steel spindle-shaft and metal bush for rugged applications
- modular system allows easy adaptation of standard products
- gold flash contact standard



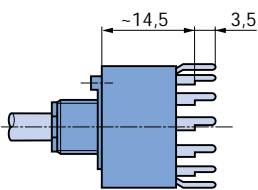
With solder eyelets



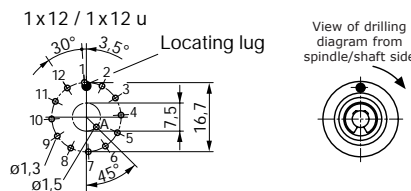
Front panel cut out



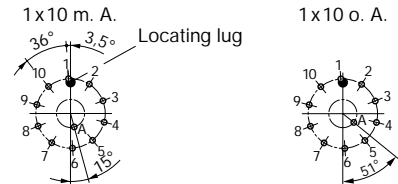
With solder pins for PCB mounting



Drilling diagram for indexing angle 30°



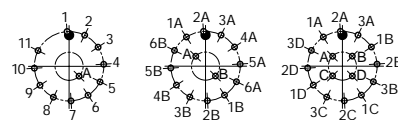
Drilling diagram for indexing angle 36°



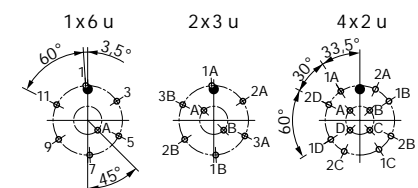
Possible modifications on request

- special type of shaft (length, diameter, form)
- special torque
- waterproof
- special end stop
- shortened bush
- hollow shaft/inner shaft









1x11 / 1x11 u 2x6 / 2x6 u 4x3 / 4x3 u



Drilling diagram for indexing angle 60°







Indexing angle 30°, shorting

Contact arrangement	Construction	Function (Pole x Position)	with solder eyelets		with pins for PCB	
			gold flash	gold 3 µm	gold flash	gold 3 µm
		1 x 12 o.A.	01-1120	01-1123	01-1120-20	01-1123-20
		2 x 12 o.A.	01-2120	01-2123	-	-
		1 x 12	01-1180	01-1183	01-1180-20	01-1183-20
		2 x 12	01-2180	01-2183	-	-
		1 x 11	01-1110	01-1113	01-1110-20	01-1113-20
		2 x 11	01-2110	01-2113	-	-
		2 x 6	01-1260	01-1263	01-1260-20	01-1263-20
		4 x 6	01-2260	01-2263	-	-
		4 x 3	01-1430	01-1433	01-1430-20	01-1433-20
		8 x 3	01-2430	01-2433	-	-

packing unit : 10 pieces




Indexing angle 30°, non-shorting


Contact arrangement	Construction	Function (Pole x Position)	with solder eyelets		with pins for PCB	
			gold flash	gold 3 µm	gold flash	gold 3 µm
		1 x 12 u.o.A.	01-1121	01-1124	01-1121-20	01-1124-20
		1 x 12 u.	01-1181	01-1184	01-1181-20	01-1184-20
		1 x 11 u.	01-1111	01-1114	01-1111-20	01-1114-20
		2 x 6 u.	01-1261	01-1264	01-1261-20	01-1264-20
		4 x 3 u.	01-1431	01-1434	01-1431-20	01-1434-20

 available on request

packing unit : 10 pieces



Indexing angle 36°, shorting

Contact arrangement	Construction	Function (Pole x Position)	with solder eyelets		with pins for PCB	
			gold flash	gold 3 µm	gold flash	gold 3 µm
		1 x 10 o.A.	01-1100	01-1103	01-1100-20	01-1103-20
		1 x 10	01-1190	01-1193	01-1190-20	01-1193-20

 available on request

packing unit : 10 pieces

Indexing angle 60°, non-shorting

Contact arrangement	Construction	Function (Pole x Position)	with solder eyelets		with pins for PCB	
			gold flash	gold 3 µm	gold flash	gold 3 µm
		1 x 6 u. o.A.	01-1101	01-1104	01-1101-20	01-1104-20
		1 x 6 u.	01-1161	01-1164	01-1161-20	01-1164-20
		2 x 3 u.	01-1231	01-1234	01-1231-20	01-1234-20
		4 x 2 u.	01-1421	01-1424	01-1421-20	01-1424-20

 available on request

packing unit : 10 pieces

Stop pins

Packing unit	Order Number
10 pieces	4007-36
50 pieces	4007-35

Contact arrangement from the spindle side

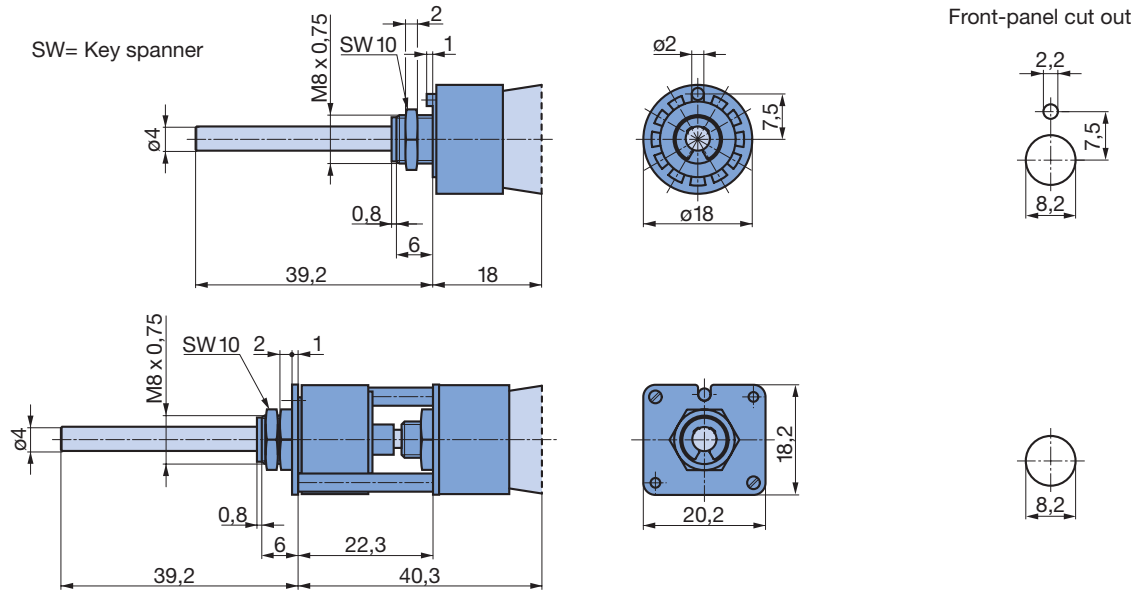
u. = non-shorting, o.A. = without end stop, can **not** be adjusted subsequently!

1 mm = 0.04 inch, 1 inch = 25.4 mm

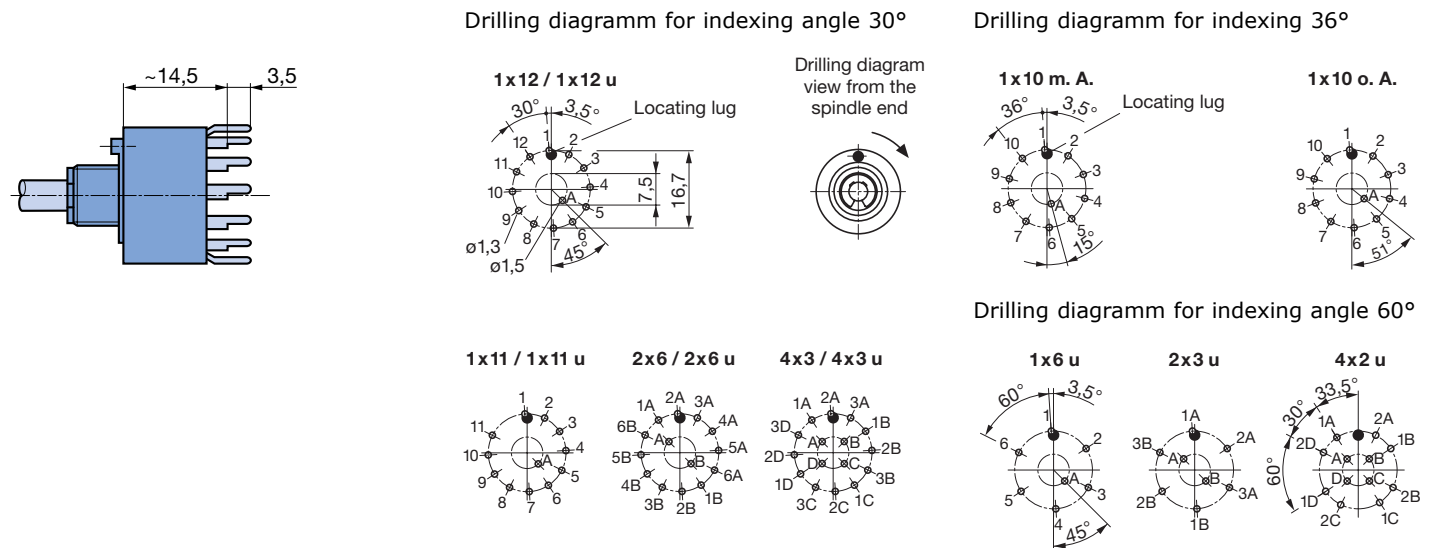
Items available from stock!

Rotary Switches Type 01

With solder eyelets



With pins for PCB mounting



Description

Rotary switch with bridge contact principle

Overall diameter
18 mm

Threaded bushing
M16 x 0,75 with 3 mm diameter shaft
M18 x 0,75 with 4 mm diameter shaft
M10 x 0,75 with 6 mm diameter shaft

Indexing angle
30° = 12 switching positions
36° = 10 switching positions
60° = 16 switching positions

On switches with fixed end-stop, adjustable stops can be set, by means of a plastic pin, on any position between 2 and the maximum (to be ordered separately).

Number of poles per wafer
1, 2 or 4 (poles)

Switching mode
Shorting or non-shorting

Contact material
Gold flash and Gold plated 3 µm

Terminals
Solder eyelets or PCB mountable

Rotary Switches Type 01

Technical information

Mechanical data

Indexing mechanism

30° = 12 positions
shorting or non-shorting

36° = 10 positions
shorting

60° = 6 positions
non-shorting

Switching torque with 1 wafer, 1 pole

Standard:
4 Ncm ± 25%
Special:
2 Ncm ± 25%
6 Ncm ± 25%

*Max. admissible tightening torque
for nuts (shaft diameter 4 mm)*
max. 300 Ncm

Vibration resistance
10–2000 Hz/10 g

Mechanical life
> 25000 switching cycles

Temperature range
– 40 °C to + 85 °C

Material data

Housing

plastic with metal threaded bush

Shaft

stainless steel

Insulation material

Wafers: HF-ceramic
Rotor: polybutylene (PBTB)

Contact material

Rivet (copper) and
segment (brass)

- gold flash
10 µm silver coated, gold flashed
approx. 0,2 µm
- 3 µm gold plated
3 µm gold plating on 3 µm nickel
layer

Wiper (brass)

- gold flash
10 µm silver plated, gold flashed
approx. 0,2 µm
- 3 µm gold plated

Soldering data

Handsoldering

Ceramic wafer ≤ 10 s/≤ 350 °C

Machine soldering

Wave ≤ 5 s/≤ 260 °C

Electrical data

Application data

Voltage < 42 V
Current < 2 A

Switching capacity with resistive load:

2 V/1,0 A AC/DC
24 V/0,5 A AC/DC
42 V/0,4 A AC/DC

Switching mode

shorting or non-shorting

Contact and lead resistance

< 10 mΩ in new condition

Insulation resistance measured

with 500 ΩDC, for 1 min
> 1011 Ω contact to contact
> 1011 Ω contact to earth

Capacitance

1 pF contact to contact

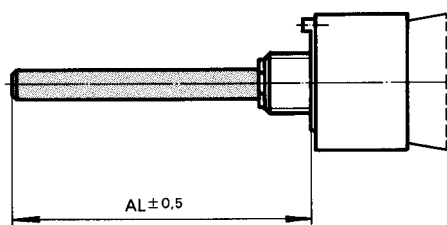
Test voltage at 50 Hz and 60% rela-

tive humidity, for 1 min
750 rms contact to contact
750 rms contact to earth
500 rms with more than one circuit

Special Options Type 01

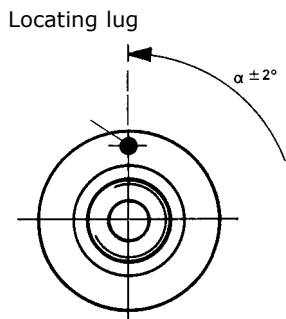
Ordering an option

To order a special option please use the order form on page 99.
Please specify your requirements and fax it to your local contact or to Elma.



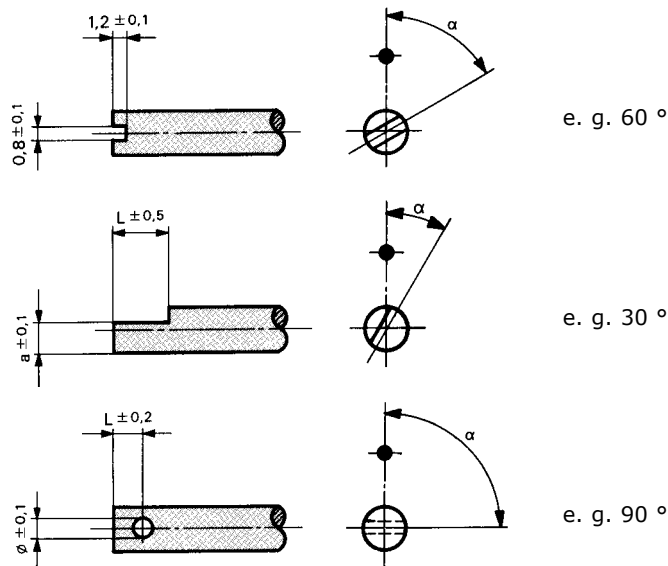
Special shaft length

To order, state the shaft length AL as shown in diagram, measured from mounting face. Please specify shaft length on page 99.

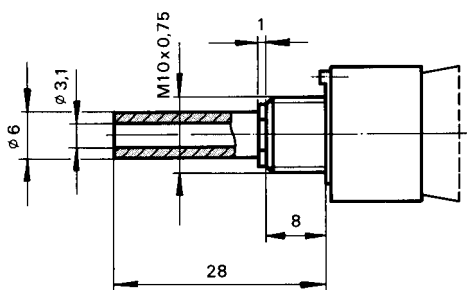


Angle in ° from locating lug.
Switch on position 1

Special types of shaft

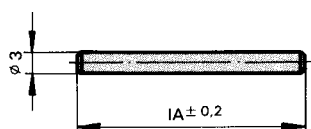


Specially machined shafts are available. Please specify dimensions on page 99.



Hollow shaft

Hollow shaft to allow concentric operation of either two switches or, for example, a switch and a potentiometer. The inner shaft (φ 3 mm) must be ordered separately.
Please complete order form on page 99.

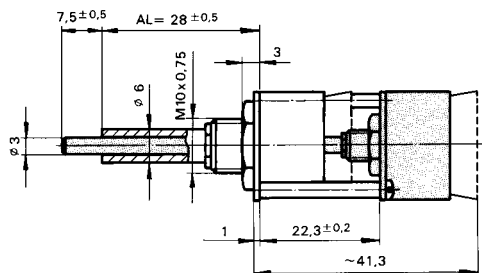


Inner shaft

Must be ordered separately for switches with hollow shaft. Please complete order form on page 99.

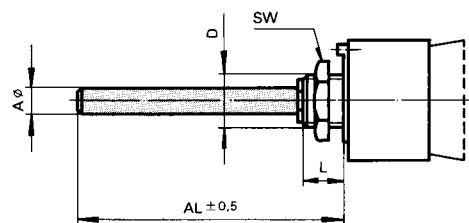
Special Options Type 01

Switches with 2 drive shafts



It is possible for two switches to be operated individually by concentric shafts on the same mounting. When ordering, the type number of each switch should be given and specified on order form page 99.

Special shaft diameters

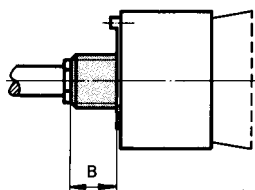


Type 01 switches are also available with the following shaft diameters:

Aφ	D	SW	L	AL Standard	AL max.
3 mm	M 6 x 0,75	10 mm	6,0 mm	59 mm	80 mm
6 mm	M 10 x 0,75	14 mm	8,0 mm	28 mm	28 mm

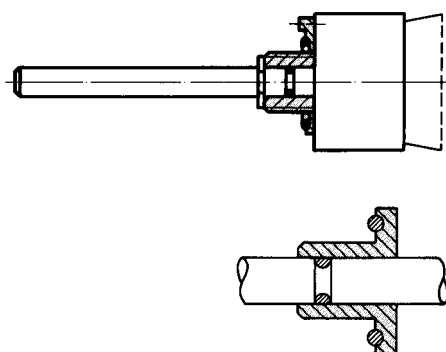
Please complete order form on page 99.

Shortened bush



Please state dimension B (Dimension B = min. 3 mm) on page 99.

Waterproof



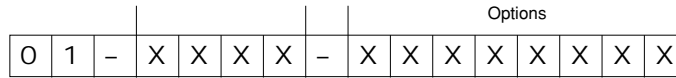
With 4 mm ϕ shaft only; to prevent water penetrating behind the front panel and into the mechanism. Waterproof up to 1 bar (IP 68)
Please complete order form on page 99.

Front-panel cut out



Ordering Code to Rotary Switches Type 01

This code specifies
the function of the switch



Switch Type

Number of wafers

Number of poles

Factory set character

0 = gold flash shorting
1 = gold flash non-shorting
3 = 3 µm gold shorting
4 = 3 µm gold non-shorting

- = Standard Md 4 Ncm
M = Md (torque) 2 Ncm
N = Md (torque) 6 Ncm

0 = shaft 4 mm Standard
M = shaft 3 mm
N = shaft 6 mm

00 = Standard
11 = BG 11 Pos.
10 = BG 10 Pos.
09 = BG 9 Pos.
08 = BG 8 Pos.
07 = BG 7 Pos.
06 = BG 6 Pos.
05 = BG 5 Pos.
04 = BG 4 Pos.
03 = BG 3 Pos.
02 = BG 2 Pos.
(BG = special end stop)

000 = Standard AL 59 mm
3 mm shaft
= Standard AL 39,2 mm
4 mm shaft
= Standard AL 28 mm
6 mm shaft
= XXX = AL (shaft length)
(z.B. 185 = 18,5 mm)

00 = Standard
20 = GS (solder pins for PCB)
30 = WD (waterproof)
70 = GS/WD
(solder pins for PCB/ waterproof)

Md = Switching torque
AL = Shaft length
BG = Special end stop
GS = With solder pins for PCB mounting
WD = Waterproof

