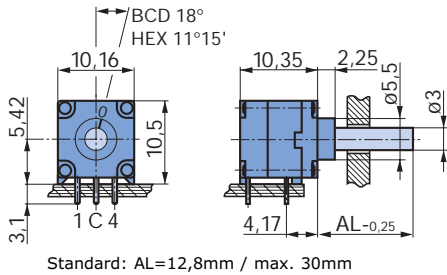
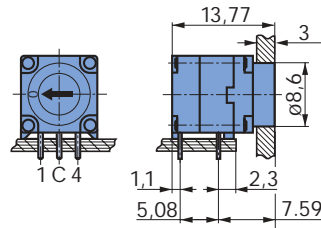


Coded Switches Type 07

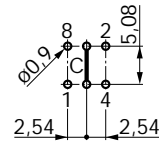
Horizontal



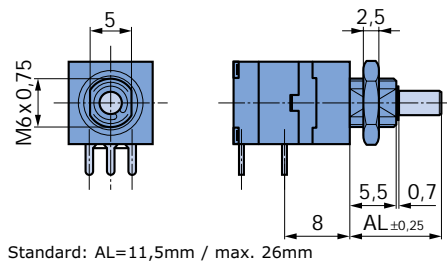
Front-panel operation



Drilling diagram
View from component side

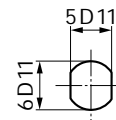


Horizontal for panel mounting

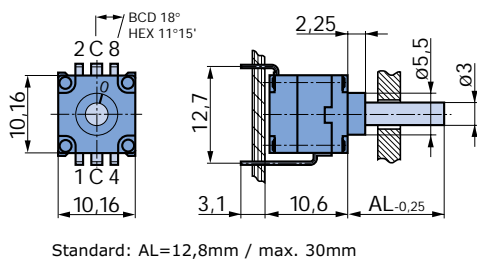


Panel mounting waterproof
O-Ring and nut supplied

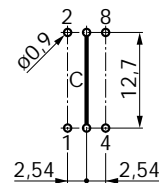
Front-panel cut out



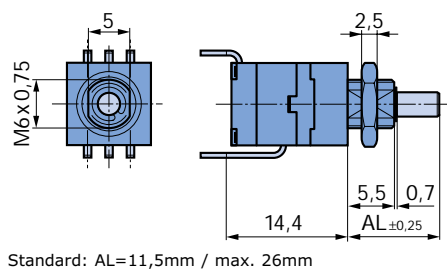
Vertical



Drilling diagram
View from component side

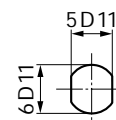


Vertical for panel mounting



Panel mounting waterproof
O-Ring and nut supplied

Front-panel cut out



Description

BCD-, HEX or Gray coding.
Shorting or non-shorting switch mode.
Horizontal or vertical version.
Operation by screwdriver or stainless steel shaft (knob).

Sealed and washable

Rotation with positive detent setting

Solid tinned terminals
(0,4 x 0,7 mm)

Terminations for direct mounting on circuit boards
2.54 mm (0.1") pitch

Indexing positions, end stop according to the code 16 resp. 10 positions with stop between the first and last position or without stop setting

Reflow version available on request

Coded Switches Type 07

Technical information

Mechanical data

Indexing mechanism
36° = 10 positions (BCD)
22° 30' = 16 positions
(HEX and Gray code)

Switching torque
2,2 Ncm
± 25% (BCD)
3,2 Ncm
± 25% (HEX and Gray code)

Max. force on the end-stop
45 Ncm (BCD)
35 Ncm (HEX and Gray code)

Panel mounting
admissible torque max. 100 Ncm

Temperature range
Storage temperature: -40 °C to +85 °C
Operating temperature: -25 °C to +85 °C

Vibration resistance
10-2000 Hz/10 g

Life
>10000 switching cycles
(>200000 switching positions BCD)
(>320000 switching positions
HEX or Gray)

Material data

Case
high quality temperature-resistant
thermoplastic

Spindle-shaft
stainless steel

Insulation
high quality thermoplastic

Contact parts
alloy copper > 3 µm gold plated

Soldering data

Handsoldering
Plastic wafer ≤ 5 s/≤ 260 °C

Machine soldering
Wave ≤ 5 s/≤ 260 °C
Reflow (THR) ≤ 5 s/≤ 260 °C
(on request)
Lead free reflow (on request)

Electrical data

Application data
Voltage < 42 V
Current < 2 A

Switching capacity
5 VA

Switching voltage
≤ 42 V (resistive load)

Switching current
≤ 0,2 A (resistive load)

Test voltage at 50 Hz/i min
≥ 500 V ~

Insulation resistance at 500 V = 1 min
≥ 10¹¹ Ω

Contact and lead resistance
< 50 mΩ in new condition

Various

Assembled in cleanroom
Class 100 000, US Federal Standard

Sealed and washable

IP protection degree
sealable up to IP 68 (5bar)

Coding

BCD

	2 ³	2 ²	2 ¹	2 ⁰
0				
1				●
2			●	
3			●	●
4		●		
5		●		●
6		●	●	
7		●	●	●
8	●			
9	●			●

BCD complem.

	2 ³	2 ²	2 ¹	2 ⁰
0	●	●	●	●
1	●	●	●	
2	●	●		●
3	●	●		
4	●		●	●
5	●		●	
6	●			●
7	●			
8		●	●	●
9		●	●	

HEX

	2 ³	2 ²	2 ¹	2 ⁰
0				
1				●
2			●	
3			●	●
4		●		
5		●		●
6		●	●	
7		●	●	●
8	●			
9	●			●
A	●		●	
B	●		●	●
C	●	●		
D	●	●		●
E	●	●	●	
F	●	●	●	●

HEX complem.

	2 ³	2 ²	2 ¹	2 ⁰
0	●	●	●	●
1	●	●	●	
2	●	●		●
3	●	●		
4	●		●	●
5	●		●	
6	●			●
7	●			
8		●	●	●
9		●	●	
A		●		●
B		●		
C			●	●
D			●	
E				●
F				

Gray Code

	2 ³	2 ²	2 ¹	2 ⁰
0				
1				●
2			●	●
3			●	
4		●	●	
5		●	●	●
6		●		●
7		●		
8	●	●		
9	●	●		●
A	●	●	●	●
B	●	●	●	
C	●		●	
D	●		●	●
E	●			●
F	●			

Special Options Type 07

Ordering an option

To order a special option please use the order form on page 63. Please specify your requirements and send it to your local contact or to Elma.

Special shaft length

Please state length AL (see diagram) measured from mounting face when ordering (max. AL = 30 mm)
Specify shaft length on page 63.

Panel mounting/waterproof version M6 x 0.75

The threaded bushing is made of die cast allows (2,5 µm tin plated, chromate finish) for enviromental protection such as salt fog exposure. Max. admissible tightening torque for nuts 100 Ncm (~10 kp cm)

Order example

ZB (panel mounting)
ZB/WD (panel mounting and waterproof)

Waterproof 2 bar (IP 68) standard, (higher level on request)

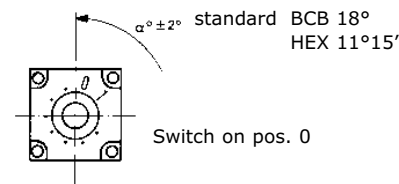
Please complete order form on page 63.

Adjustable stops (internal stop)

Adjustable stops can be set during assembly on all switch positions between 1 and 16, e. g. coded output 0 to F. Adjustable stop settings which do not start from coded output 0 (e. g. 3-6) are available on request. Please complete order form on page 63.

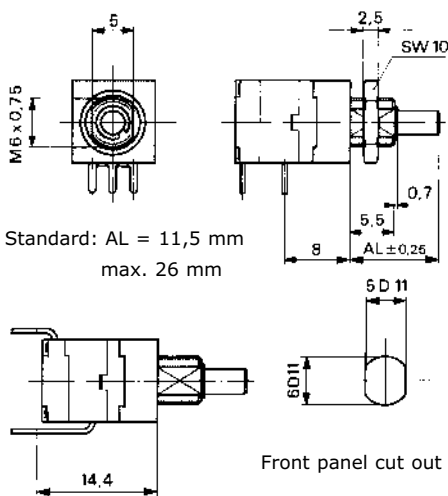
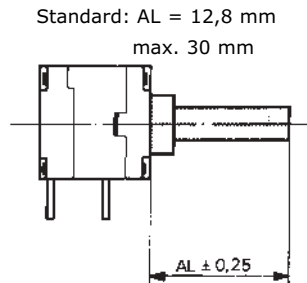
Special type of shaft

Specially machined shafts are available. Please attach a sketch or drawing to your order. Specify dimensions on page 63.

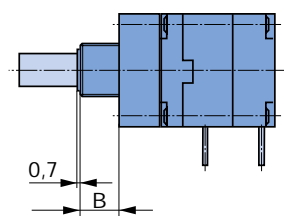


Shortened bush

Please state dimension B
Dimension B = min. 3,5 mm / max. 5,5 mm
Specify dimensions on page 63.

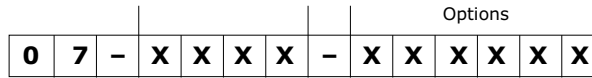


Panel mounting waterproof
O-Ring and nut supplied



Ordering code to Type 07

This code specifies the function of the switch



Switch Type

- 0 = horizontal (screwdriver actuation)
- 1 = horizontal with shaft
- 2 = vertical (screwdriver actuation)
- 3 = vertical with shaft
- 4 = horizontal FKS (Front panel operation)

- 0 = endless rotation
- 1 = with end stop

- 3 = BCD
- 4 = BCD - compl.
- 5 = Hex
- 6 = Hex - compl.
- 7 = Gray-Code

- 3 = shorting
- 4 = non-shorting

- Options
- 0 = Standard
 - E = BG 15 Pos. 0 - E
 - D = BG 14 Pos. 0 - D
 - C = BG 13 Pos. 0 - C
 - B = BG 12 Pos. 0 - B
 - A = BG 11 Pos. 0 - A
 - 9 = BG 10 Pos. 0 - 9
 - 8 = BG 9 Pos. 0 - 8
 - 7 = BG 8 Pos. 0 - 7
 - 6 = BG 7 Pos. 0 - 6
 - 5 = BG 6 Pos. 0 - 5
 - 4 = BG 5 Pos. 0 - 4
 - 3 = BG 4 Pos. 0 - 3
 - 2 = BG 3 Pos. 0 - 2
 - 1 = BG 2 Pos. 0 - 1
 - (BG = special end stop)

- 000 = Standard AL 12,8
Panel mounting AL 11,5mm
- XXX = AL (shaft length)
z. B. AL 10,5 mm = 105

- 00 = Standard
- 20 = ZB (panel mounting)
- 30 = ZB / WD
(panel mounting/waterproof)

- = Standard
- V = Anti-static package
- T = 3,5 Ncm torque
- S = 3,5 Ncm torque and anti-static package

BG = Special end stop
AL = Shaft length
ZB = Panel mounting
WD = Waterproof
FKS = Front panel operation

