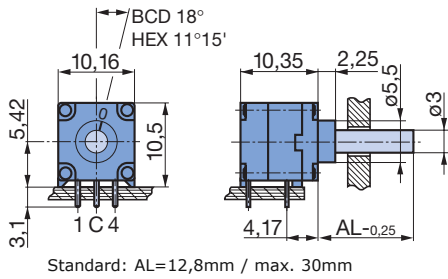
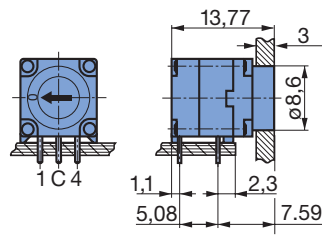


Coded Switches Type 07

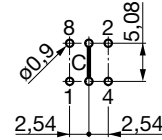
Horizontal



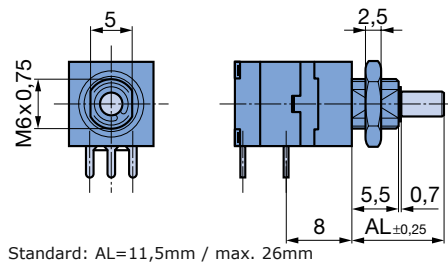
Front-panel operation



Drilling diagram
View from component side

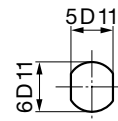


Horizontal for panel mounting

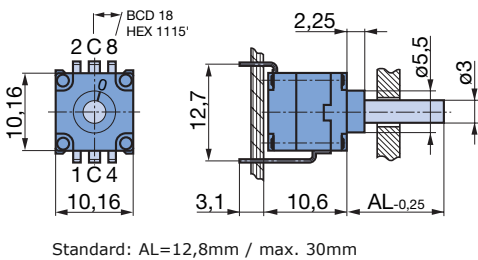


Panel mounting waterproof
O-Ring and nut supplied

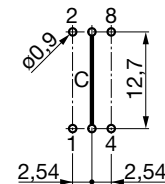
Front-panel cut out



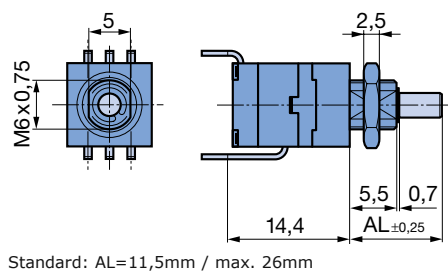
Vertical



Drilling diagram
View from component side

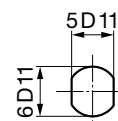


Vertical for panel mounting



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 < 0.2 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 (2bar)

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

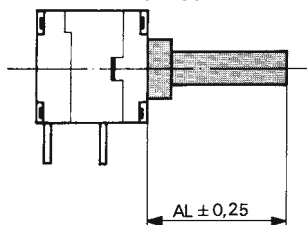
	2 ³	2 ²	2 ¹	2 ⁰
0				
1				•
2			•	•
3			•	
4		•	•	
5		•	•	•
6		•		•
7		•		
8	•	•		
9	•	•		•
A	•	•	•	•
B	•	•	•	
C	•		•	
D	•		•	•
E	•			•
F	•			

Special Options Type 07

Ordering an option

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

Standard: AL = 12,8 mm
max. 30 mm



Special shaft length

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

Panel mounting/waterproof version M6 x 0.75

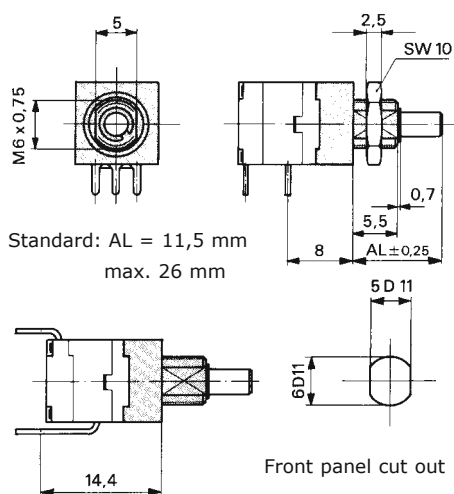
The threaded bushing is made of die cast alloys (2,5 µm tin plated, chromate finish) for enviromental protection such as salt fog exposure.
Max. admissible tightening torque for nuts 100 Ncm (~10 kp cm)

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.



Standard: AL = 11,5 mm
max. 26 mm

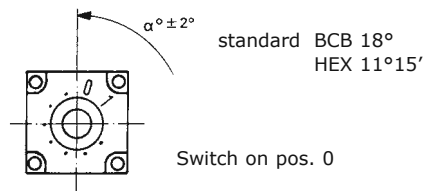
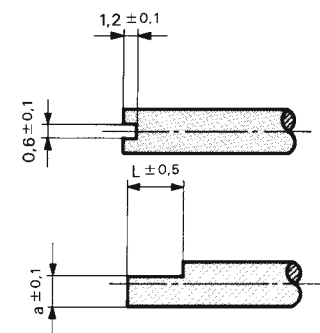
Panel mounting waterproof
O-Ring and nut supplied

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.

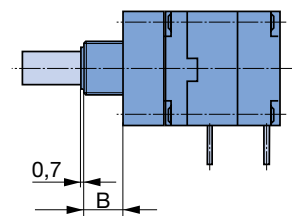
Special type of shaft

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



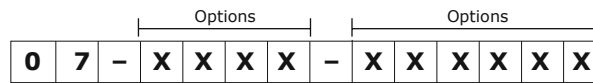
Shortened bush

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



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

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

- 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

