# Coded Switch Type C08

- **16 positions gray coding**
- **Excellent indexing feel with 2.5 Ncm switching torque (remains consistent over life)**
- **9 x 9 x 10 mm body size**
- **Lowest profile PCB to shaft center line: 4.65 mm**
- **SMT reflow version available**
- **20,000 switching cycles**
- **Optional IP68 front panel sealing**
- **Operating temperature range: -40 to +85°C**

SWISS CLICK INDEXING SYSTEM™

Pb ELV (2000/53/EC)
    RoHS (2002/95/EC)
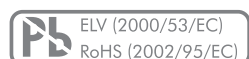
Standard Product Variety

- THT or SMT reflow (vacuum pick & place)
- Threaded or non-threaded bushing
- With end stop or endless rotating
- IP60 or IP68 front panel sealing
- **Various** shaft types
- Tray or tape & reel packaging

Possible Customization

- Shaft dimensions and shape
- Others

Examples of Customization

Typical Applications

- Frequency and channel selection for two way radios
- Target aiming devices
- Other miniaturized, mobile applications

Examples of Customization

- ...

Preference Types Selection Chart[1]

Packaging	IP Sealing	PCB Mounting	Bushing	Shaft Length	With End Stop	Endless Rotating
Tray	IP60	SMT	Non-threaded	15.2 mm	C08S211ST	C08S221ST
			Threaded	15.2 mm	C08S111ST	C08S121ST
		THT	Threaded	18.0 mm	C08T111LT	C08T121LT
			Threaded	15.2 mm	C08T111ST	C08T121ST
	IP68	SMT	Threaded	15.2 mm	C08S311ST	C08S321ST
		THT	Threaded	18.0 mm	C08T311LT	C08T321LT
			Threaded	15.2 mm	C08T311ST	C08T321ST

[1] For other types/options, see type key.

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Specifications

Mechanical Data
Resolution: .... 16 positions (22.5° indexing)
Switching torque (new condition):...................................... 2.5 Ncm (+/- 30%)
Rotational life: .... 20,000 cycles min.
Residual switching torque (end of life): .... 90% typ.
End stop strength: .... 40 Ncm min.
Fastening torque of nut: .... 100 Ncm max.

Electrical Data
Coding/output:.. Gray
Contact resistance: .... 10 Ohms max. (over the entire rotational life)

Material Data
Shaft: .... Brass
Housing: .... Zinc diecast with Miralloy plating, fiber enforced high performance plastic
Nut: .... Brass
Contact system: .... Alloy copper, nickel plated
Soldering leads:... Alloy copper
O-rings: .... NBR (Nitril), 70 shore, reflowable

Environmental Data
Operating/storage temperature range: .... -40 to +85°C max.
IP sealing: .... IP60, optional IP68 (2 bar, 1 hour) shaft/front panel sealing

Packaging Sizes
Tray: .... 50 pcs.
Tape & reel:.. 300 pcs.

Soldering Conditions

Hand soldering:...340°C max. during 2 s max.
Wave soldering:...280°C max. peak temperature
during 5 s max.

Temperatures or process duration exceeding rated maximum conditions may harm switch function.

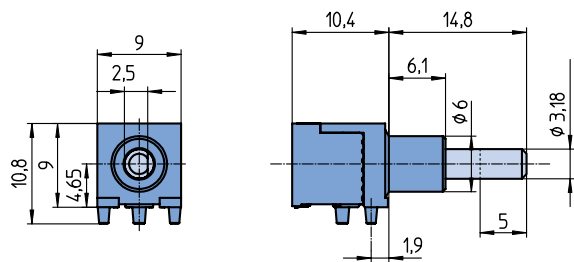Reflow Profile (complies to IPC/JEDEC J-STD-020C)

Gray Coding

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

■ On
□ Off

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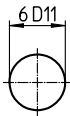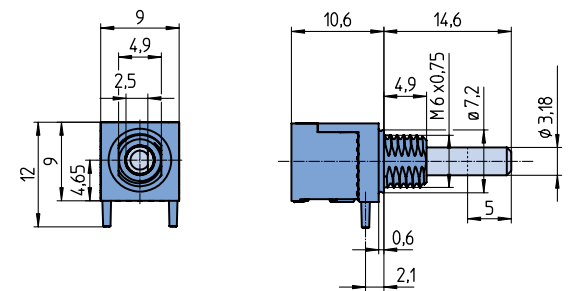Your Solution Partner
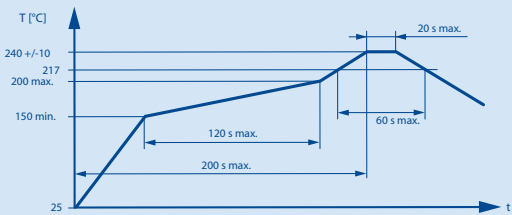
Drawings

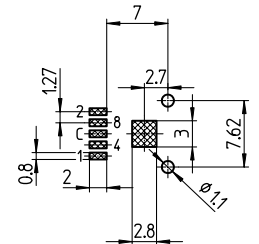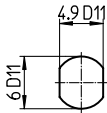### SMT Non-Threaded

View from mounting side
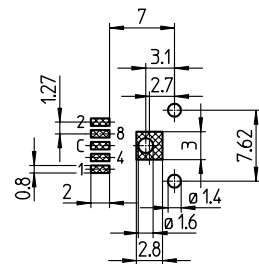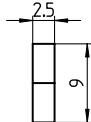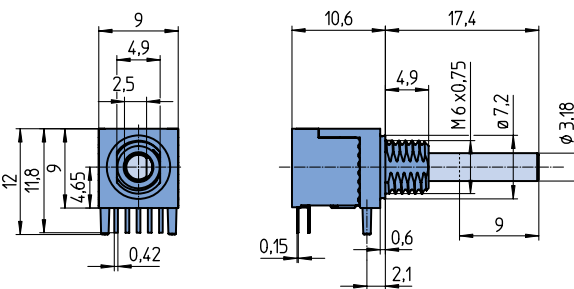
Front panel cut out

SMT Threaded

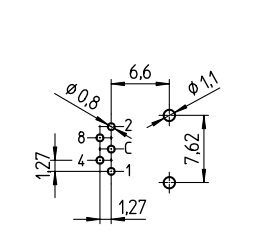View from mounting side

Front panel cut out

Nut M6x0,75

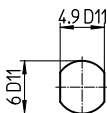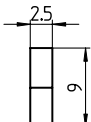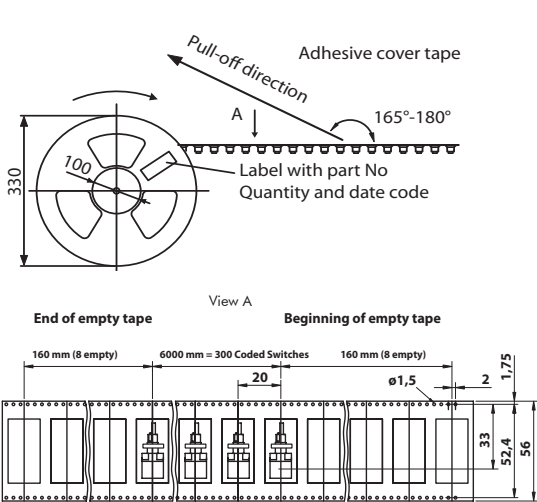### THT Threaded
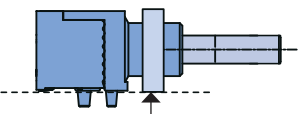
View from mounting side

Front panel cut out

Nut M6x0,75

Tape & Reel Packaging

Pull-off direction

Adhesive cover tape

165°-180°

A

Label with part No
Quantity and date code

View A

End of empty tape   **Beginning of empty tape**

160 mm (8 empty)   6000 mm = 300 Coded Switches   160 mm (8 empty)
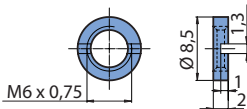
EIA 481 Norm

Soldering Support Donut

A soldering support donut is supplied on bushings with tape & reel packaging or tray packed SMT types. To be removed after soldering.

Slotted Nut

M6 x 0,75

Ordering number (50 pcs. bags):
Brass: 4424-28
Stainless steel: 4424-30

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Type Key

| C | 0 | 8 | | X | X | X | 1 | X | X |

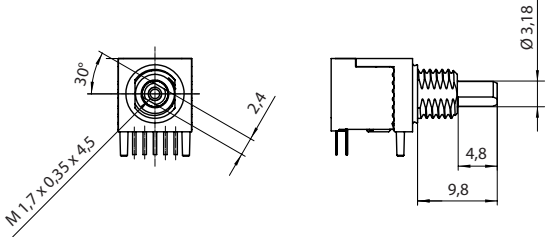**PCB Mounting**

S - SMT
T - THT

Bushing

1 - Threaded (nut supplied, packed separately)
2 - Non-threaded (available for SMT only)
3 - Threaded, IP68; shaft/front panel sealing
    (nut supplied, packed separately)

End Stop

1 - With end stop
2 - Endless rotating

Packaging

T - Tray (50 pcs. per tray, donut supplied
    for SMT types)
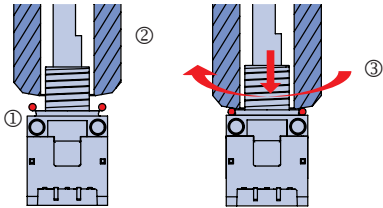R - Tape & reel (300 pcs. per reel,
    donut supplied)

Shaft Type

S - D-shape, short; 15.2 mm
L - D-shape, long; 18.0 mm
U - Double-D shape with thread[1]

[1] Double-D Shape Shaft

O-Ring Mounting Tool

Order number: C08RINGTL

① Slip the lubricated O-ring over the bushing.

② Slide the mounting tool over the bushing.

③ While pushing down the O-ring, rotate the
   mounting tool simultaneously.

Desoldering Tool

Desoldering tool with individual soldering iron adaptor is available on request.