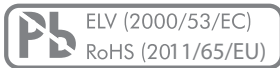


MAIN FEATURES

MINIATURE DESIGN

- › Gray coding 16 positions
- › Switching mode: Shorting
- › 2.5 Ncm switching torque (remains consistent over life)
- › Body size 9 x 9 x 10 mm
- › Lowest profile PCB to shaft center line: 4.65 mm
- › SMT reflow version available
- › Switching cycles 20,000
- › Optional IP68 front panel sealing
- › Operating temperature range: -40 to +85°C

SWISS CLICK INDEXING SYSTEM™



For information about the SWISS CLICK INDEXING SYSTEM™ see chapter "Technical explanations"

PRODUCT VARIETY

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

POSSIBLE CUSTOMIZATIONS

- Shaft dimension and shape
- Others

TYPICAL APPLICATIONS

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

1 PREFERENCE TYPES SELECTION CHART

¹ For other types/options, see type key.

| PACKAGING | IP SEALING | PCB MOUNTING | BUSHING | SHAFT LENGHT | PART NUMBER WITH END-STOP | PART NUMBER 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 |
| | | | Threaded | 15.2 mm | C08T311ST | C08T321ST |

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% typical |
| End-Stop strength: | 40 Ncm min. |
| Fastening torque of nut: | 100 Ncm max. |

ELECTRICAL DATA

| | |
|--|--|
| Coding/output: | Gray |
| Switching mode: | Shorting |
| Contact resistance (new condition): | 50 mΩ |
| Insulation resistance (new condition): | 1 GΩ min. @ 500 VDC |
| Load current: | 10 mA max. (resistive load, 15 VDC max.voltage) |
| Dielectric withstanding voltage: | 500 VDC during 60 seconds (pin to pin, pin to housing) |

MATERIAL DATA

| | |
|------------------|---|
| Shaft: | Brass |
| Housing: | Zinc diecast with Miralloy plating, fiber enforced high performance plastic |
| Nut: | Brass |
| Contact system: | Alloy copper (Coding disk: nickel gold plated) |
| Soldering leads: | Alloy copper |
| O-rings: | NBR (nitrile), 70 shore, reflowable |

ENVIRONMENTAL DATA

| | |
|--------------------------------------|--|
| Operating/storage temperature range: | -40 to +85°C max. |
| IP sealing: | IP60, optional IP68 (2 bar, 1 h) shaft/front panel sealing |
| Vibration: | 10 G _{rms} max. @ 10 to 2000 Hz |
| Flammability: | UL94-HB |

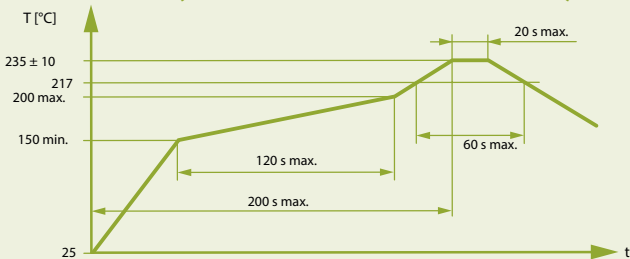
PACKAGING QUANTITY

| | |
|--------------|----------|
| Tray: | 50 pcs. |
| Tape & reel: | 300 pcs. |

SOLDERING CONDITIONS

| | |
|-----------------|---|
| Hand soldering: | 280°C max. during 2 sec max. |
| Wave soldering: | 280°C max. peak temperature during 2 sec max. |

REFLOW PROFILE (COMPLIES WITH IPC/JEDEC J-STD-020C)



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

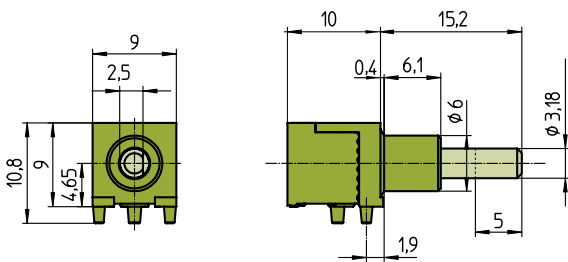
GRAY CODING

For information about Gray coding please see technical explanations at the end of the catalog.

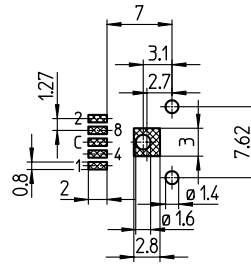
DRAWINGS

Tolerances unless otherwise specified DIN ISO 2768-1 (m)

SMT NON-THREADED

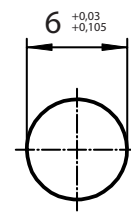


DRILLING DIAGRAM

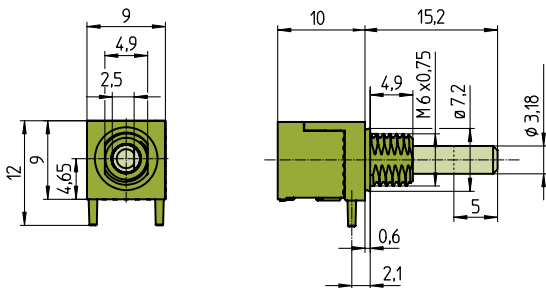


View from component side of the PCB

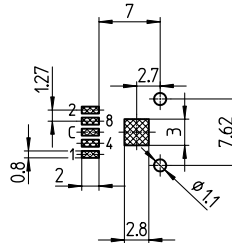
FRONT PANEL CUT OUT



SMT THREADED

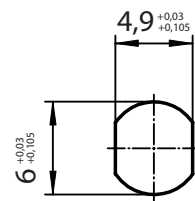


DRILLING DIAGRAM

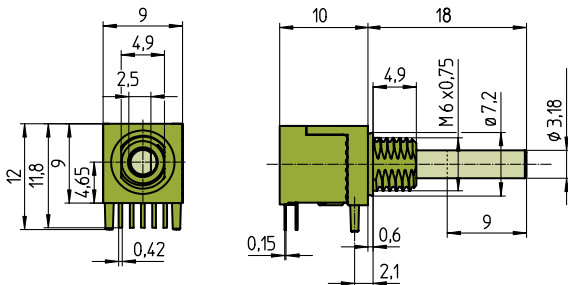


View from component side of the PCB

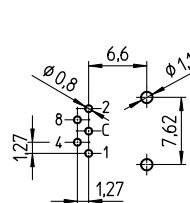
FRONT PANEL CUT OUT



THT THREADED

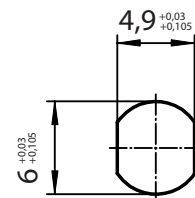


DRILLING DIAGRAM

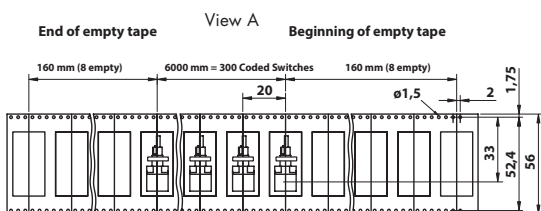
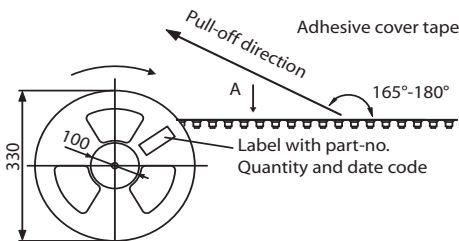


View from component side of the PCB

FRONT PANEL CUT OUT

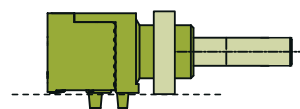


TAPE & REEL PACKAGING



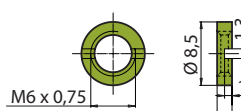
EIA 481 Norm

SOLDERING SUPPORT DONUT



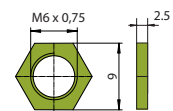
A soldering support donut is supplied on bushings with tape & reel packaging or tray packed SMT types. To be removed after soldering.

SLOTTED NUT



Part Number (50 pcs. bags):
- Brass: 4424-28
- Stainless steel (cross slot): 4424-31

FRONT PANEL CUT OUT



Spare Part
Part Number (50 pcs. bags):
- Brass: 4424-22

CODED SWITCH TYPE C08

TYPE KEY

C08 - - - **1** - -

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

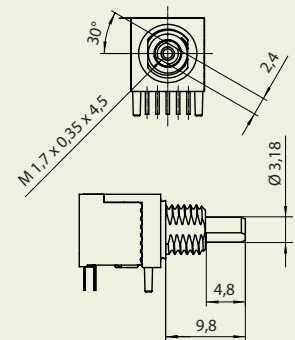
PACKAGING

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

SHAFT TYPE

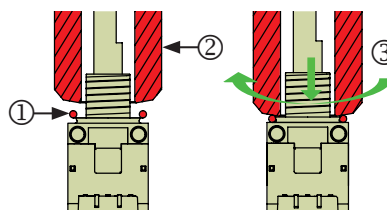
- S** D-shape, short; 15.2 mm
- L** D-shape, long; 18.0 mm

- U** Double-D-shape with thread



O-RING MOUNTING TOOL

Part 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 simultaneously rotate the mounting tool.