

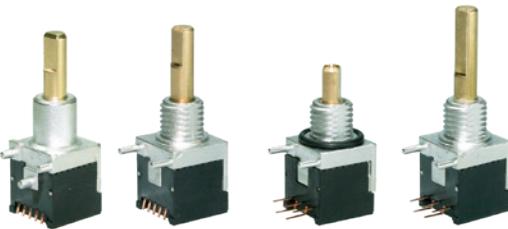
Product description

MAIN FEATURES

MINIATURE DESIGN

- › Gray coding 16 positions
- › Switching mode: Shorting
- › Switching torque: 2.5 Ncm
- › Body size: 9 x 9 x 10 mm
- › Lowest profile PCB to shaft center line: 4.65 mm
- › Switching cycles 20'000
- › THT horizontal
- › IP68 front panel sealing
- › Operating temperature range: -40 to +85 °C

C08

ELV (2000/53/EC)
RoHS (2011/65/EU)

PRODUCT VARIETY

- 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

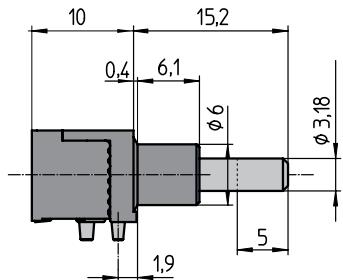
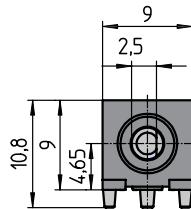
TYPICAL APPLICATIONS

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

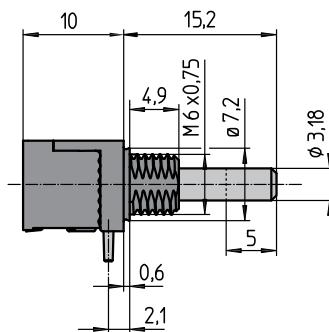
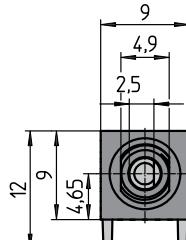
Dimensions and pin assignment

SWITCH DESIGN

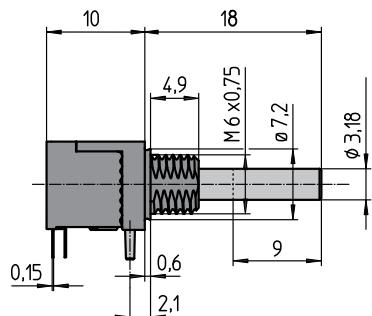
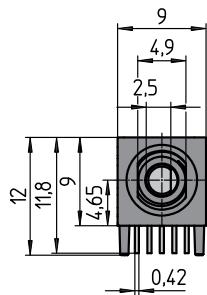
SMT NON-THREADED



SMT THREADED



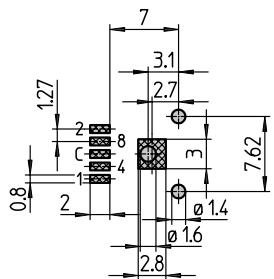
THT THREADED



PIN ASSIGNMENT AND DRILLING DIAGRAM

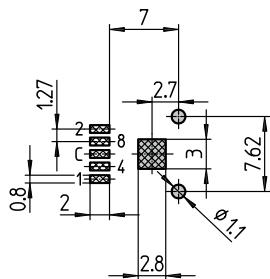
SMT NON-THREADED

View from component side of the PCB



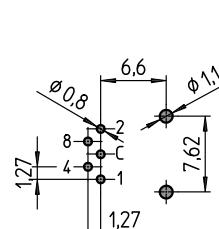
SMT THREADED

View from component side of the PCB



THT NON-THREADED

View from component side of the PCB



Dimensions in mm
 Tolerances according to DIN ISO 2768-1 (m), unless otherwise specified

Dimensions and pin assignment

FRONT PANEL CUT OUT

SMT NON-THREADED

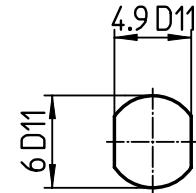
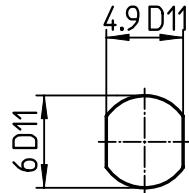
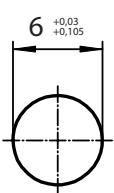
SMT THREADED

THT THREADED

View from component side of the PCB

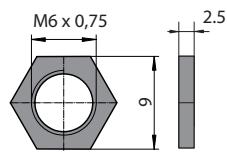
View from component side of the PCB

View from component side of the PCB

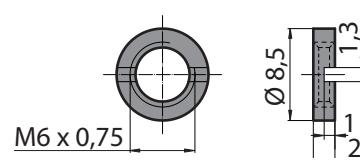


NUT

HEX NUT (SUPPLIED)



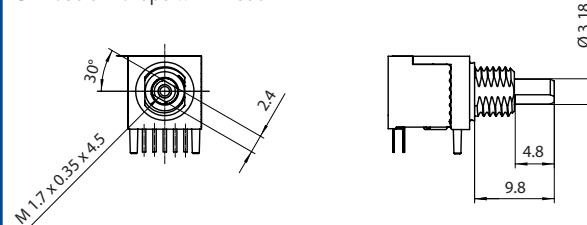
SLOTTED NUT



Dimensions in mm
 Tolerances according to DIN ISO 2768-1 (m), unless otherwise specified

Ordering information

ORDERING CODE

C08	-	-	-	1	-	-
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 pieces / tray, donut supplied for SMT types)						
R Tape & reel (300 pieces / 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						
						

PREFERENCE TYPES SELECTION CHART¹

PACKAGING	IP SEALING	PCB MOUNTING	BUSHING	SHAFT LENGTH	PART NUMBER WITH END STOP	ENDLESS ROTATING
Tray	IP60	SMT	Non-threaded	15.2 mm	C08S211ST	C08S221ST
			Threaded	15.2 mm	C08S111ST	C08S121ST
		THT	Threaded	18 mm	C08T111LT	C08T121LT
	IP68		Threaded	15.2 mm	C08T111ST	C08T121ST
	SMT	Threaded	15.2 mm	C08S311ST	C08S321ST	
		Threaded	18 mm	C08T311LT	C08T321LT	
	Threaded	15.2 mm	C08T311ST	C08T321ST		

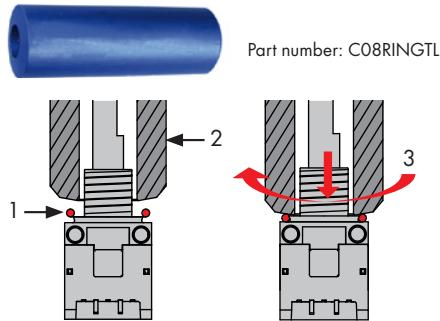
¹ For other types | options, see type key

Ordering information

PACKAGING

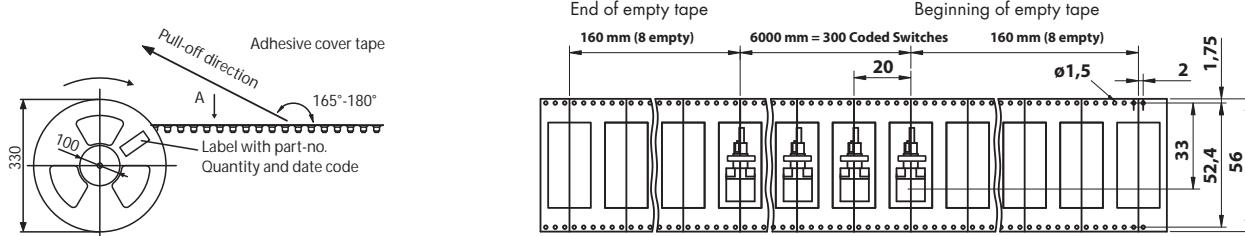
Blister box:	50 pieces
Tape & reel:	300 pieces

O-RING MOUNTING TOOL

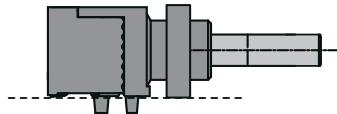


- 1 Slip the lubricated O-ring over the bushing.
- 2 Slide the mounting tool over the bushing.
- 3 While pushing down the O-ring simultaneously rotate the mounting tool.

TAPE & REEL PACKAGING



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.

ACCESSORIES AND SPARE PARTS

Hex nut M6 x 0.75:	Part number 4424-22 (50 pieces / bag), brass
Slotted nut M6 x 0.75:	Part number 4424-28 (50 pieces / bag), brass
	Part number 4424-31 (50 pieces / bag), stainless steel (cross slot)

Specifications

MECHANICAL DATA

Detent angle positions:	22.5° detent angle 16 positions
Rotary limitation end stop:	Without or between first and last position
Switching torque:	2.5 Ncm ($\pm 30\%$ in new condition)
Rotational life:	> 20'000 cycles (tested at room temperature)
Rotational stop strength:	> 40 Ncm
Fastening torque of nut (front panel mounting):	M6 x 0.75: < 100 Ncm

ELECTRICAL DATA

Electrical connection:	SMT: Soldering surfaces THT: Pins 0.15 x 0.42 mm
Switching voltage:	< 15 VDC (resistive load)
Switching current:	< 10 mA (resistive load)
Contact surface:	< 50 mΩ (in new condition)
Signal coding:	Gray
Switching mode:	Shorting
Dielectric strength:	500 VDC during 60 s (pin-to-pin, pin-to-housing)
Insulation resistance:	> 1 GΩ at 500 VDC (pin-to-pin, pin-to-housing, in new condition)

MATERIALS

Shaft:	Brass CuZn39Pb3
Bushing housing:	Zinc die casting (with miralloy plating), fiberglass reinforced high performance plastic
Contact surface:	Cu alloy (Au plated)
Soldering leads:	Cu alloy
Hex nut:	Brass
Slotted nut:	Brass or stainless steel
O-rings:	NBR (nitrile rubber), 70 shore A

ENVIRONMENTAL DATA

Operating temperature:	-40 to +85 °C (IEC 60068-2-14)
Storage temperature:	-40 to +85 °C (IEC 60068-2-14)
IP sealing against front panel:	IP60 without sealing IP68 with shaft and front panel sealing (2 bar, 1 h)
Vibration:	10 G _{RMS} at 10 to 2'000 Hz
Flammability:	UL94-HB

SOLDERING CONDITIONS

Hand soldering:	< 280 °C during 2 s
Wave soldering:	< 280 °C during 2 s

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