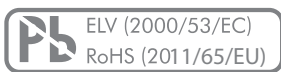


MAIN FEATURES

RUGGED

- > Gray, Hex or BCD coding 2 to 16 positions
- > Ruggedised stainless steel 6 mm tapped shaft
- > Switching torque 4.5 Ncm
- > Switching mode: shorting or non-shorting
- > Gold plated contacts, nickel silver bushing
- > MIL-STD-810F (salt, fog and humidity)
- > MIL-STD-202G (shock and vibration)
- > Optional IP68 front panel sealing (up to 5 bar)
- > Operating temperature range: -40 to +85°C
- > Various options and customizations



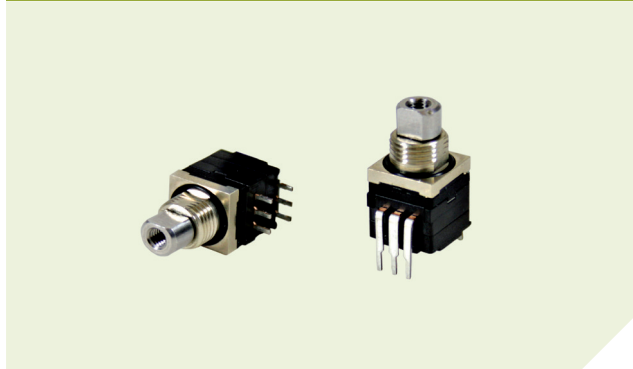
PRODUCT VARIETY

- Vertical or horizontal mounting
- BCD, Hex or Gray coding (shorting or non-shorting)
- Number of positions
- Switching torque BDC: 2.2 or 4.0 Ncm
- Switching torque Hex & Gray: 3.2 or 4.5 Ncm
- With end-stop or endless rotating
- IP60 or IP68 front panel sealing

POSSIBLE CUSTOMIZATIONS

- Shaft dimension and shape
- Bushing, mounting

TYPE M07



TYPICAL APPLICATIONS

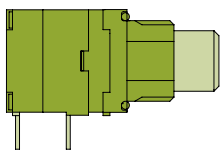
- Frequency and channel selection for two way radios
- Target aiming devices
- Aircraft transponders
- Portable medical equipment
- Industrial automation
- Vision and optical products
- Mobile PCs

POSSIBLE CUSTOMIZATIONS

- Switching torque
- High/low torque function "on/off"
- Others

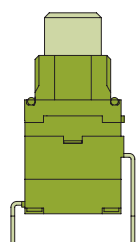
1 PREFERENCE TYPES SELECTION CHART

¹ For other types/options, see type key.



HORIZONTAL

IP SEALING	CODING	SWITCHING MODE	POSITIONS/ INDEXING ANGLE	TORQUE	PART NUMBER WITH END-STOP	PART NUMBER ENDLESS ROTATING
IP60	Gray	Shorting	16 / 22.5°	3.2 Ncm	M07-1173-200000	M07-1073-200000
				4.5 Ncm	M07-1173H200000	M07-1073H200000
	BCD	Shorting	10 / 36°	2.2 Ncm	M07-1133-200000	M07-1033-200000
				4.0 Ncm	M07-1133H200000	M07-1033H200000
IP68	Gray	Shorting	16 / 22.5°	3.2 Ncm	M07-1173-300000	M07-1073-300000
				4.5 Ncm	M07-1173H300000	M07-1073H300000
	BCD	Shorting	10 / 36°	2.2 Ncm	M07-1133-300000	M07-1033-300000
				4.0 Ncm	M07-1133H300000	M07-1033H300000



VERTICAL

IP SEALING	CODING	SWITCHING MODE	POSITIONS/ INDEXING ANGLE	TORQUE	PART NUMBER WITH END-STOP	PART NUMBER ENDLESS ROTATING
IP60	Gray	Shorting	16 / 22.5°	3.2 Ncm	M07-3173-200000	M07-3073-200000
				4.5 Ncm	M07-3173H200000	M07-3073H200000
	BCD	Shorting	10 / 36°	2.2 Ncm	M07-3133-200000	M07-3033-200000
				4.0 Ncm	M07-3133H200000	M07-3033H200000
IP68	Gray	Shorting	16 / 22.5°	3.2 Ncm	M07-3173-300000	M07-3073-300000
				4.5 Ncm	M07-3173H300000	M07-3073H300000
	BCD	Shorting	10 / 36°	2.2 Ncm	M07-3133-300000	M07-3033-300000
				4.0 Ncm	M07-3133H300000	M07-3033H300000

SPECIFICATIONS

MECHANICAL DATA

Resolution:	BCD: 10 positions (36° indexing) Other Coding: 16 positions max. (22.5° indexing) End-stops can be set from 2 to 16 (10) positions
Switching torque (new condition):	BCD: 2.2 or 4.0 Ncm (+/- 25%) Hex & Gray: 3.2 or 4.5 Ncm (+/- 25%)
Rotational life:	10'000 cycles min.
End-Stop strength:	45 Ncm BCD; 35 Ncm other Coding
Fastening torque of nut (front panel mounting):	100 Ncm max.

ELECTRICAL DATA

Coding/output:	BCD, BCD complementary, Hex, Hex complementary or Gray
Switching mode:	Shorting or non-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 (pins to pins, pins to housing)

MATERIAL DATA

Shaft:	Stainless steel (1,4305 grade)
Housing:	Nickel silver, fiber enforced high performance plastic
Nut:	Brass, nickel plated
Contact system:	CuBe alloy, AuCo plated (hard gold)
Soldering leads:	CuBe alloy, tin plated
O-rings:	NBR (nitrile), 70 shore

ENVIRONMENTAL DATA

Operating/storage temperature range:	-40 to +85°C max.
IP sealing:	IP68 (50 meters submersion over 4 h) Washable (sealed contact system)
Vibration:	10 G _{rms} max. @ 10 to 2000 Hz
Flammability:	UL94-HB

PACKAGING QUANTITY

Tray:	50 or 200 pcs.
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¹ The packaging size depends on shipment quantity. If the shipment quantity is
 < 200 pcs. then standard tray 50 pcs.
 ≥ 200 pcs. then standard tray 200 pcs.

SOLDERING CONDITIONS

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

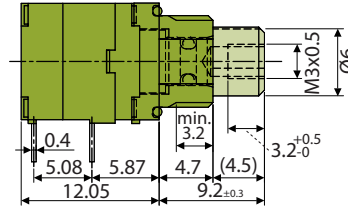
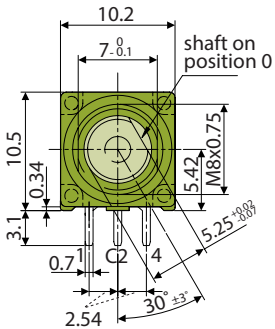
CODING

For all available Coding please see technical explanations at the end of the catalog

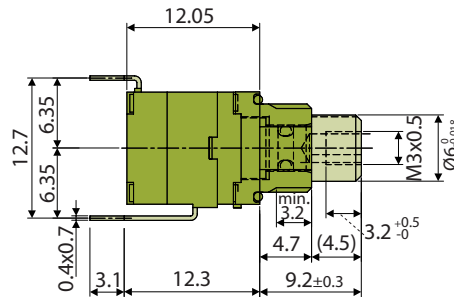
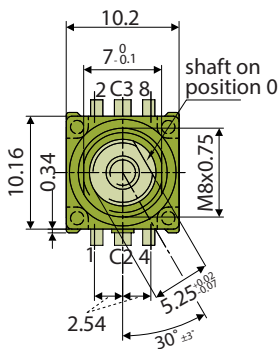
DRAWINGS

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

07 HORIZONTAL



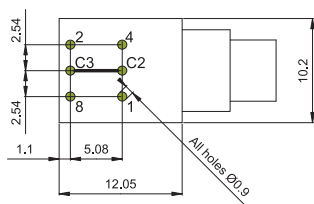
07 VERTICAL



07 DRILLING DIAGRAMS

HORIZONTAL

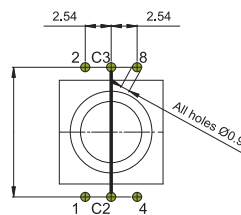
Commons (C2, C3) must be connected together on the PCB



View from component side of the PCB

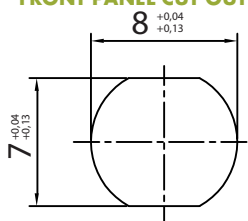
VERTICAL

Commons (C2, C3) must be connected together on the PCB

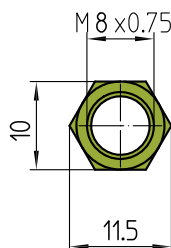


View from component side of the PCB

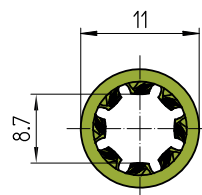
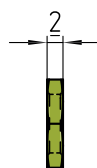
FRONT PANEL CUT OUT



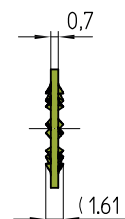
NUT AND WASHER (BOTH SUPPLIED)



Spare Part
Part Number (10 pcs. bag)
- Brass nickel plated: 4024-81



Spare Part
Part Number (1 pc. bag, MOQ 10 pcs.)
- 5708-06



TYPE KEY



STYLE

- 1** Horizontal
- 3** Vertical

END-STOP

- 0** Endless rotating
- 1** With End-Stop

CODING

- 3** BCD (max. 10 pos.)
- 4** BCD compl. (max. 10 pos.)
- 5** Hex
- 6** Hex compl.
- 7** Gray

(Explanation: see chapter technical explanation at the end of the catalog)

4 SWITCHING MODE

- 3** Shorting
- 4** Non-shorting

(Explanation: see chapter technical explanation at the end of the catalog)

* Non-shorting not possible with "Gray Code"

NUMBER OF POSITIONS

- 0** Standard (10 or 16 pos.)
- E** 15 pos. (0 – E)
- D** 14 pos. (0 – D)
- C** 13 pos. (0 – C)
- B** 12 pos. (0 – B)
- A** 11 pos. (0 – A)
- 9** 10 pos. (0 – 9)
- 8** 9 pos. (0 – 8)
- 7** 8 pos. (0 – 7)
- 6** 7 pos. (0 – 6)
- 5** 6 pos. (0 – 5)
- 4** 5 pos. (0 – 4)
- 3** 4 pos. (0 – 3)
- 2** 3 pos. (0 – 2)
- 1** 2 pos. (0 – 1)

SHAFT STYLE

- 000** Basic style shaft: see drawing

IP SEALING

- 20** IP60
- 30** IP68

TORQUE, PACKAGING

- H** 4.5 Ncm (BCD: 4.0 Ncm)
(50/200 pcs.)
- 3.2 Ncm (BCD: 2.2 Ncm)
(50/200 pcs.)