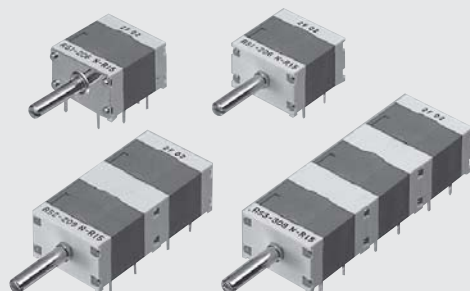


ROTARY SELECTOR SWITCHES

RS/RG

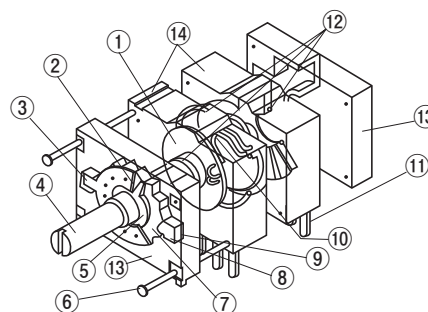
RoHS compliant



FEATURES

- RoHS compliant
- P.C.B. mounted, compact size and DIP compatible
- Protection by “O” ring (contact block) against dust and for cleaning after soldering
- Precious metal alloy wiping type contacts provide a long life (50000 revolutions at no load) and high reliability. (In house comparison)
- Both shorting and non-shorting types are available

INTERNAL STRUCTURE



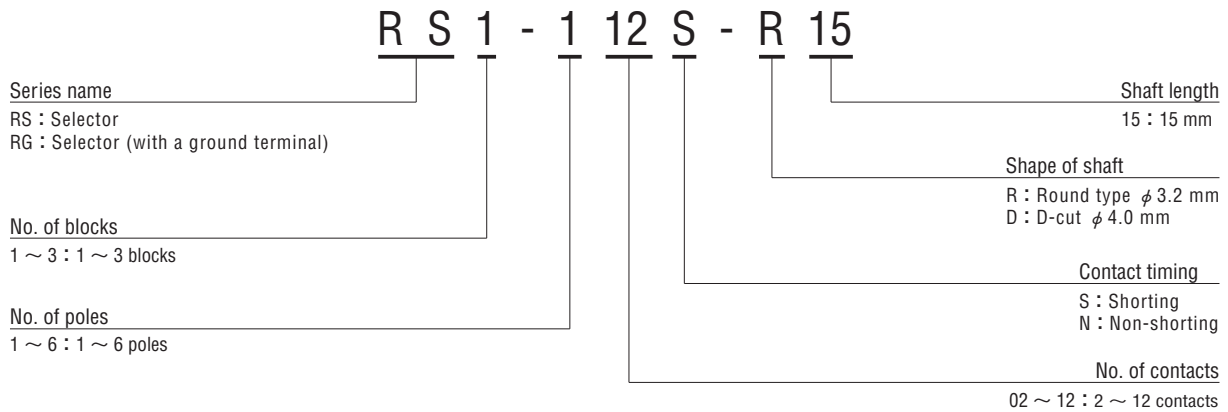
Part name		Material	Flammability
①	Rotor	POM (Polyoxymethylene)	UL94HB
②	Stopper pin	Copper alloy	—
③	Stopper pin holder		
④	Shaft	Copper alloy, Nickel-plated	
⑤	Stopper ring	Nickel-plated	
⑥	Linking pin	Copper alloy, Nickel-plated	
⑦	Click gear	PA (Polyamide)	UL94HB
⑧	Click plate	POM (Polyoxymethylene)	
⑨	Click spring	SWPA (Piano wire)	—
⑩	Contact spring	Multi metal alloy	
⑪	Terminal pin	Copper alloy, Gold-plated	
⑫	“O” ring	Silicone rubber	UL94HB
⑬	Cover	PBT (Polybutyleneterephthalate)	
⑭	Housing		

The DIP-TYPE ROTARY SELECTOR SWITCHES RS/RG series listed here are standard versions, but our production will be made upon receipt of your orders.

RS/RG

ROTARY SELECTOR SWITCHES

PART NUMBER DESIGNATION



※ Shaft length of 10 mm or 20 mm is also available.

LIST OF PART NUMBERS

No. of blocks	No. of poles	No. of contacts										
		02	03	04	05	06	07	08	09	10	11	12
1	1	RS1-102	RS1-103	RS1-104	RS1-105	RS1-106	RS1-107	RS1-108	RS1-109	RS1-110	RS1-111	RS1-112
	2	RS1-202	RS1-203	RS1-204	RS1-205	RS1-206						
2	3						RS2-207	RS2-208	RS2-209	RS2-210	RS2-211	RS2-212
	4	RS2-302	RS2-303	RS2-304	RS2-305	RS2-306						
3	5						RS3-307	RS3-308	RS3-309	RS3-310	RS3-311	RS3-312
2	6											
	7	RS2-402	RS2-403	RS2-404	RS2-405	RS2-406						
3	8	RS3-502	RS3-503	RS3-504	RS3-505	RS3-506						
	9	RS3-602	RS3-603	RS3-604	RS3-605	RS3-606						

☐ : Not manufactured

※ Verify the above part numbers when placing orders.

※ The above part numbers are all available respectively with the combination of Ground terminal (with or without). Contact timing (Shorting or Non-shorting), and Shaft shape (Round or D-cut).

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RS/RG

ROTARY SELECTOR SWITCHES

STANDARD SPECIFICATIONS

Circuit type	1 pole 2 ~ 12 contacts (per block) 2 poles 2 ~ 6 contacts (per block)
Operating temperature range	-40 ~ 85 °C
Storage temperature range	
Sealing	Washable (only contact block, "O" ring sealed) ※ Please refer to page 150, 151
Net weight	Approx. 7 g (1 block) Approx. 13.6 g (2 blocks) Approx. 19.4 g (3 blocks)

ELECTRICAL CHARACTERISTICS

Contact rating Maximum current Minimum current Maximum voltage Minimum voltage	1 VA 1 A 1 μA 30 V 20 mV
Contact timing	Shorting, Non-shorting
Contact resistance	100 mΩ maximum
Insulation resistance	1000 MΩ (DC500 V) minimum
Dielectric strength	AC500 V, 60 s
Electrostatic capacity	4 pF maximum, 10 kHz

MECHANICAL CHARACTERISTICS

Adjustment torque	60 ± 30 mN·m {612 ± 306 gf·cm}
Stopper strength	500 mN·m {5.1 kgf·cm} minimum
Stepping angle	30°
Terminal strength	10 N {1.02 kgf} minimum
Solderability	245 ± 3 °C, 2 ~ 3 s
Soldering heat	Flow : 260 ± 3 °C as the temperature in a pot of molten solder, immersion from head of terminal to backside of board, 5 ~ 6 s, two times maximum
	Manual soldering : 380 ± 10 °C, 3 ~ 4 s

{ } : Reference only

ENVIRONMENTAL CHARACTERISTICS

Vibration	Amplitude 3 mm or Acceleration 196 m/s ² , 10-2000-10 Hz, 3 directions for 4 h each
Shock	980 m/s ² , 6 ms 6 directions for 3 times each
Load life	500,000 steps or 50,000 cycles at 6 contacts with no load 200,000 steps or 20,000 cycles at 6 contacts with rated load
Humidity (Steady state)	40 °C, Relative humidity 90 ~ 95 %, 240 h
High temperature exposure	85 °C, 16 h
Low temperature exposure	-40 °C, 16 h

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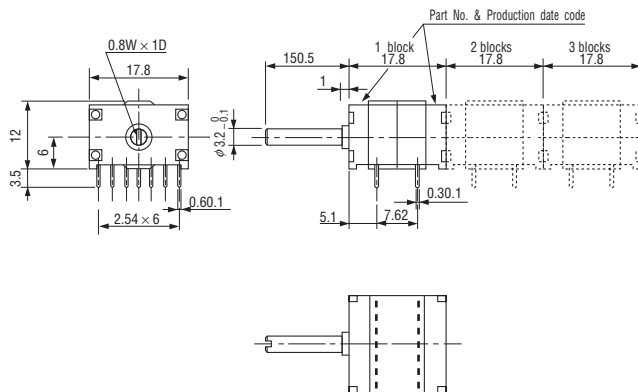
RS/RG

ROTARY SELECTOR SWITCHES

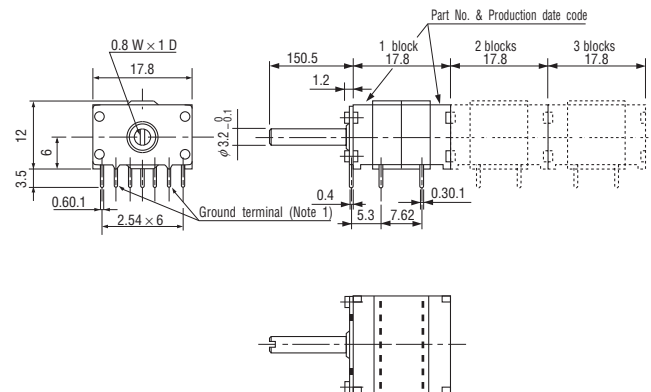
OUTLINE DIMENSIONS

Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

RS series



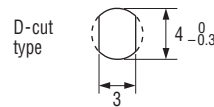
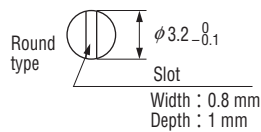
RG series



(Note1)

A ground terminal is connected electrically to a shaft.

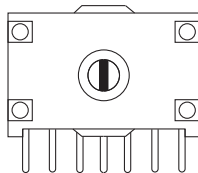
(A) Diameter of shaft



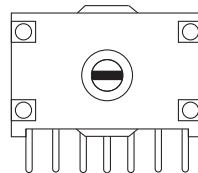
<Shaft slot direction>

There is a difference in the direction of the slot on the shaft between shorting and non-shorting type. The location of the shaft of each type when their shafts are fully turned to CCW is shown in the chart below.

Shorting type



Non-shorting type



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RS/RG

ROTARY SELECTOR SWITCHES

■ TERMINAL CONNECTION / P.C.B. THROUGH HOLE DIMENSIONS

(Unit: mm)

	RS	RG
Terminal pin layout (Bottom view)	2 poles 6 contacts 1 pole 12 contacts 4 poles 6 contacts External connection	2 poles 12 contacts External connection
P.C.B. dimensions (Bottom view)	RS 1 RS case RS 2 RS case	RG 1 RG case RG 2 RG case

■ PACKAGING SPECIFICATIONS

- Boxing of one block type is performed 20 pcs. (More than two blocks type are 10 pcs.) per box. Order will be accept for the quantities by packaging unit(s).
(Ex. 1 block: 20 pcs, 40pcs... / 2 blocks: 10 pcs, 20 pcs...)

Note: The conventional knob (Round shaft, ϕ 3.2 mm) available in the market such as the one in the picture can be used.



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