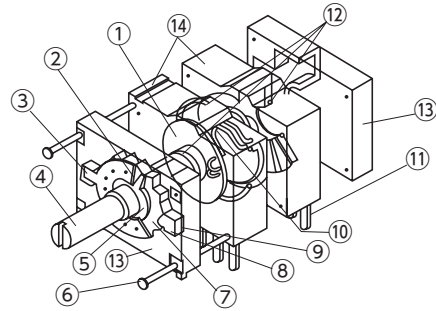


FEATURES

- 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 longlife (50000 revolutions at no load) and high reliability. (In house comparison)
- Both shorting and non-shorting types are available
- Resin material is UL Recognized 94HB

INTERNAL STRUCTURE



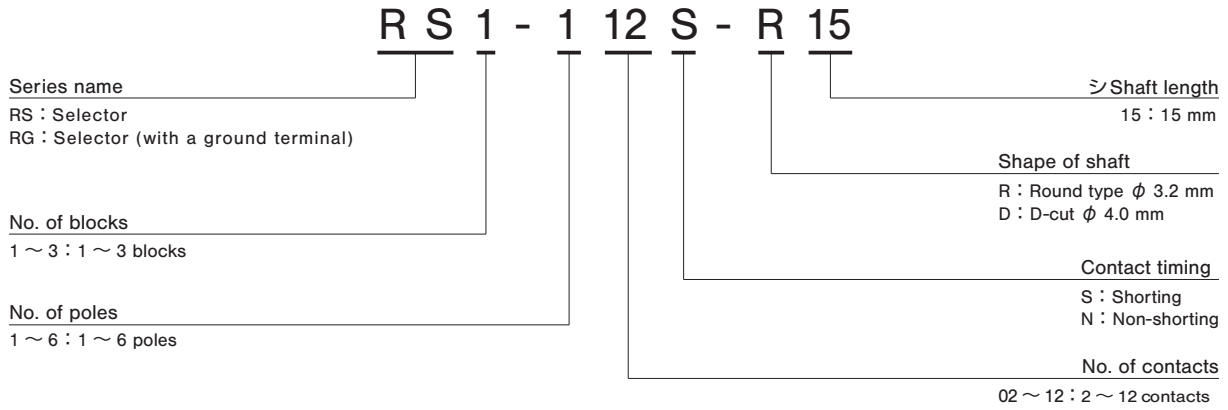
Part name	Material
① Rotor	Polyoxymethylene
② Stopper pin	Copper alloy
③ Stopper pin holder	
④ Shaft	Copper alloy, Nickel-plated
⑤ Stopper ring	Nickel-plated
⑥ Linking pin	Copper alloy, Nickel-plated
⑦ Click gear	PA (Polyamide)
⑧ Click plate	Polyoxymethylene
⑨ Click spring	SWPA (Piano wire)
⑩ Contact spring	Multi metal alloy
⑪ Terminal pin	Copper alloy, Gold-plated
⑫ "O" ring	Silicone rubber
⑬ Cover	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	RS2-402	RS2-403	RS2-404	RS2-405	RS2-406	/	/	/	/	/	/
	7	RS3-502	RS3-503	RS3-504	RS3-505	RS3-506	/	/	/	/	/	/
3	8	RS3-602	RS3-603	RS3-604	RS3-605	RS3-606	/	/	/	/	/	/
	9	/	/	/	/	/	/	/	/	/	/	/

☐ :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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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 149, 150
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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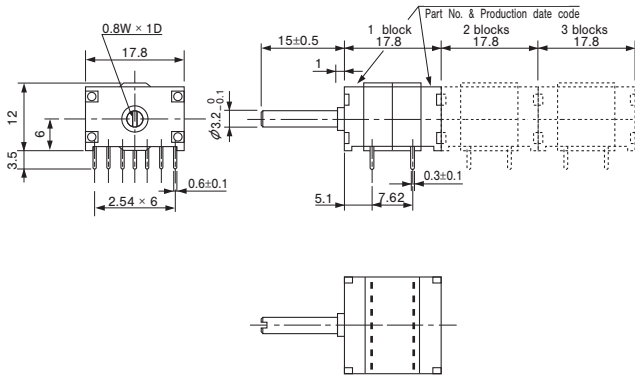
RS/RG

ROTARY SELECTOR SWITCHES

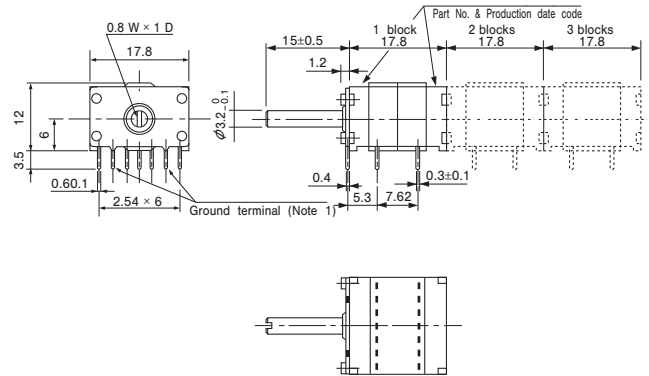
OUTLINE DIMENSIONS

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

RS series

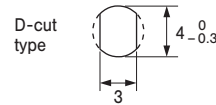
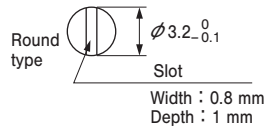


RG series



(Note 1)
A ground terminal is connected electrically to a shaft.

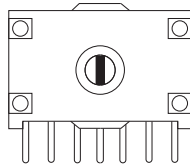
(A) Diameter of shaft



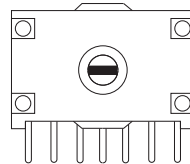
<Shaft slot direction>

There is a difference in the direction of the slot on the shaft between shorting and non-shortening 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-shortening type

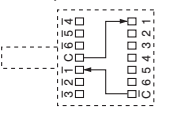
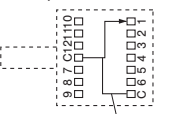
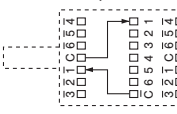
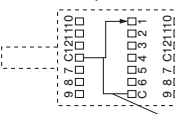
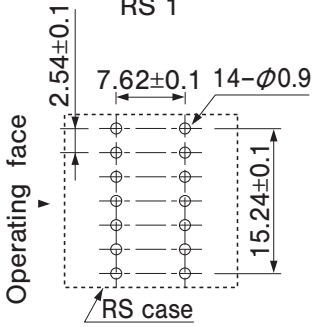
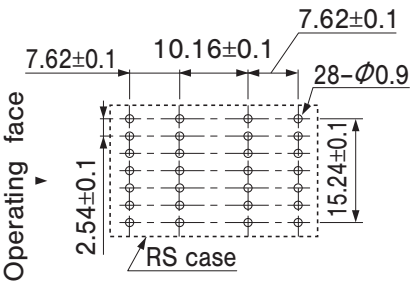
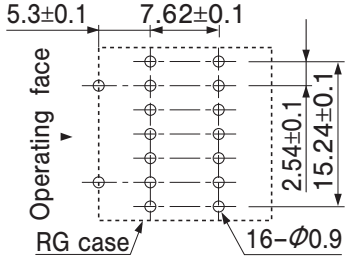
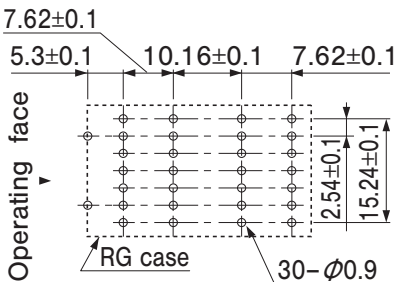


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RS/RG ROTARY SELECTOR SWITCHES

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

(Unit: mm)

	RS	RG
Terminal pin layout (Bottom view)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>2 poles 6 contacts</p>  </div> <div style="text-align: center;"> <p>1 pole 12 contacts</p>  </div> </div> <p style="text-align: center; margin-top: 5px;">External connection</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>4 poles 6 contacts</p>  </div> <div style="text-align: center;"> <p>2 poles 12 contacts</p>  </div> </div> <p style="text-align: center; margin-top: 5px;">External connection</p>
P.C.B. dimensions (Bottom view)	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="text-align: center;"> <p>RS 1</p>  <p>Operating face</p> <p>RS case</p> </div> <div style="text-align: center; margin-top: 20px;"> <p>RS 2</p>  <p>Operating face</p> <p>RS case</p> </div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="text-align: center;"> <p>RG 1</p>  <p>Operating face</p> <p>RG case</p> </div> <div style="text-align: center; margin-top: 20px;"> <p>RG 2</p>  <p>Operating face</p> <p>RG case</p> </div> </div>

■ 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, 40 pcs... / 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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