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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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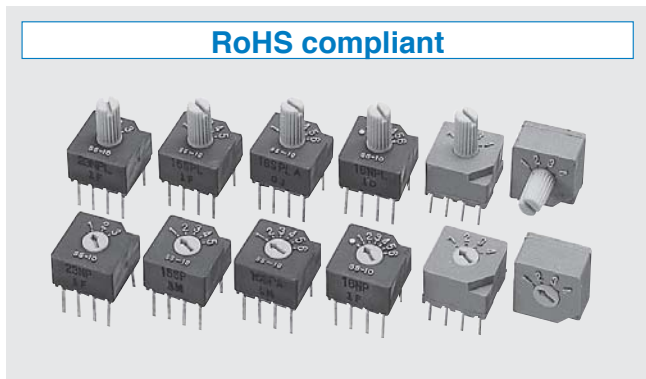
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ROTARY SELECTOR SWITCHES **SS-10/S-2050**



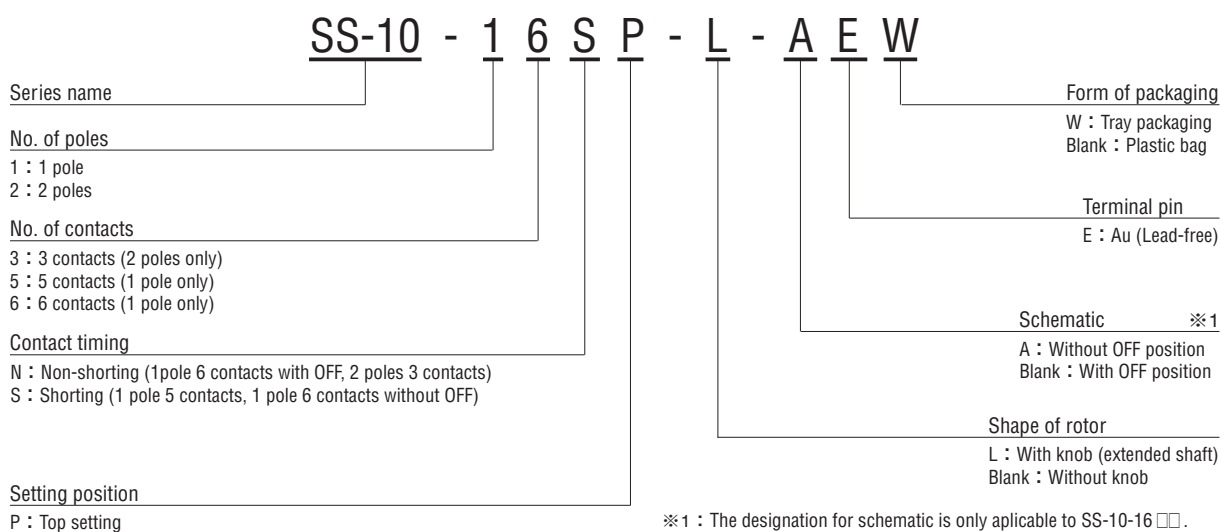
FEATURES

- RoHS compliant
- Compact-size DIP pin configuration
- Protected against dust and washable after soldering
- Self-cleaning mechanism

INTERNAL STRUCTURE
SS-10 series

Part name	Material	Flammability
① Rotor	Polyoxymethylene	UL94HB
② "O" ring	Silicone rubber	
③ Base	Polybutyleneterephthalate	
④ Terminal pin	Copper alloy, Gold-plated	—
⑤ Contact	Copper alloy, Gold-plated	
⑥ P.C.B.	Gold-plated epoxy board	UL94HB
⑦ Housing	Polybutyleneterephthalate	

PART NUMBER DESIGNATION



※1 : The designation for schematic is only applicable to SS-10-16 □□.
The other partnumbers (ex. S-2050, SS-10-15SPEW) are without OFF position.

※ Please refer to the LIST OF PART NUMBERS when placing orders.

SS-10/S-2050

ROTARY SELECTOR SWITCHES

LIST OF PART NUMBERS

Circuit type	Shape		Form of packaging	Contact timing		Pieces in package
				Non-shorting	Shorting	
1 pole 4 contacts	Top setting	Without knob	Tray packaging	S-2050W		50 pcs./tray
			Plastic bag	S-2050		25 pcs./pack
		With knob	Tray packaging	S-2150W		50 pcs./tray
			Plastic bag	S-2150		25 pcs./pack
	Side setting	Without knob	Tray packaging	S-2051W		50 pcs./tray
			Plastic bag	S-2051		25 pcs./pack
	With knob	Tray packaging	S-2151W		50 pcs./tray	
		Plastic bag	S-2151		25 pcs./pack	
1 pole 5 contacts	Top setting	Without knob	Tray packaging		SS-10-15SP-EW	50 pcs./tray
			Plastic bag		SS-10-15S-PE	25 pcs./pack
		With knob	Tray packaging		SS-10-15SP-L-EW	50 pcs./tray
			Plastic bag		SS-10-15SP-L-E	25 pcs./pack
1 pole 6 contacts	With OFF	Without knob	Tray packaging	SS-10-16NP-EW		50 pcs./tray
			Plastic bag	SS-10-16NP-E		25 pcs./pack
		With knob	Tray packaging	SS-10-16NP-L-EW		50 pcs./tray
	Plastic bag		SS-10-16NP-L-E		25 pcs./pack	
	Without OFF	Without knob	Tray packaging		SS-10-16SP-AEW	50 pcs./tray
			Plastic bag		SS-10-16SP-AE	25 pcs./pack
With knob		Tray packaging		SS-10-16SP-L-AEW	50 pcs./tray	
	Plastic bag		SS-10-16SP-L-AE	25 pcs./pack		
2 poles 3 contacts	Top setting	Without knob	Tray packaging	SS-10-23NP-EW		50 pcs./tray
			Plastic bag	SS-10-23NP-E		25 pcs./pack
		With knob	Tray packaging	SS-10-23NP-L-EW		50 pcs./tray
			Plastic bag	SS-10-23NP-L-E		25 pcs./pack



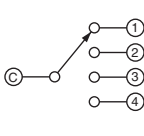
☐: Not manufactured

※ Verify the above part numbers when placing orders.



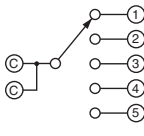
Tray version can be supplied only in tray nuts.

SCHEMATIC DIAGRAMS



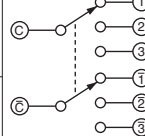
1 pole 4 contacts

Series	Switching specifications	Schematic
S-2050 S-2051 S-2150 S-2151	 	



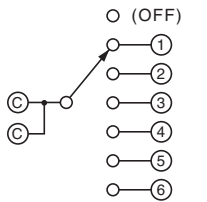
1 pole 5 contacts

Series	Switching specifications	Schematic
SS-10-15SP-E SS-10-15SP-L-E	 	



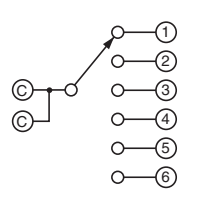
2 poles 3 contacts

Series	Switching specifications	Schematic
SS-10-23NP-E SS-10-23NP-L-E	 	

1 pole 6 contacts (With OFF)

Series	Switching specifications	Schematic
SS-10-16NP-E SS-10-16NP-L-E	 	

1 pole 6 contacts (Without OFF)

Series	Switching specifications	Schematic
SS-10-16SP-AE SS-10-16SP-L-AE	 	

SS-10/S-2050

ROTARY SELECTOR SWITCHES

■ TERMINAL CONNECTION / P.C.B. THROUGH HOLE DIMENSIONS (Unit: mm)

	SS-10-15	SS-10-16	SS-10-23	S-2050 S-2150	S-2051 S-2151
Terminal pin layout (Bottom view)					
P.C.B. dimensions (Bottom view)	Dimension is common to SS-10-15, SS-10-16 and SS-10-23 series. 				

■ STANDARD SPECIFICATIONS

Circuit type	1 pole 4 contacts 1 pole 5 contacts 1 pole 6 contacts 2 poles 3 contacts
Operating temperature range	-25 ~ 70 °C
Storage temperature range	
Sealing	Washable by "O" ring ※Please refer to page 150, 151
Net weight	Approx. 0.84 g (without knob) Approx. 0.94 g (with knob)

■ ELECTRICAL CHARACTERISTICS

Contact rating Non-switching Switching Minimum	DC50 V 100 mA DC5 V 100 mA DC20 mV 1 μA
Contact timing	Shorting Non-shorting
Contact resistance	100 mΩ maximum
Insulation resistance	100 MΩ (DC100 V) minimum
Dielectric strength	AC300 V, 60 s

■ MECHANICAL CHARACTERISTICS

No. of positions	3, 4, 5, 6
Adjustment torque	40 mN·m {408 gf·cm} maximum
Stopper strength	50 mN·m {510 gf·cm} minimum
Stepping angle	36° (1 pole 4 contacts) 30° (2 poles 3 contacts) 30° (1 pole 5 contacts) 22.5° (1 pole 6 contacts, with OFF) 28° (1 pole 6 contacts, without OFF)
Terminal strength	15 N {1.53 kgf} minimum
Solderability	245 ± 3 °C, 2 ~ 3 s
Soldering heat	Flow soldering 260 ± 3 °C, 5 ~ 6 s, two times maximum Manual soldering 380 ± 10 °C, 3 ~ 4 s

■ ENVIRONMENTAL CHARACTERISTICS

Vibration	Amplitude 1.5 mm or Acceleration 98 m/s ² , 10-500-10 Hz, 3 directions for 2 h each
Shock	490 m/s ² , 11 ms 6 directions for 3 times each
Humidity (Steady state)	40 °C, Relative humidity 90 ~ 95 %, 240 h
Load life	500 cycles minimum DC5 V, 100 mA
High temperature exposure	70 °C, 240 h
Low temperature exposure	-25 °C, 96 h
Thermal shock	-25 (0.5 h) ~ 70 °C (0.5 h), 5 cycles

{ } : Reference only

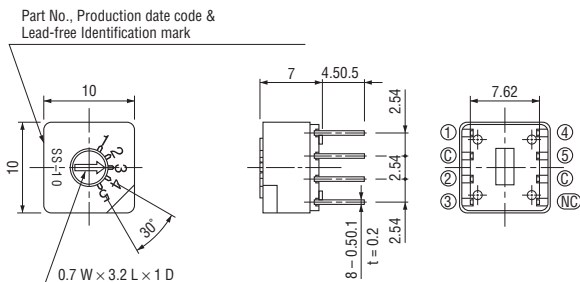
SS-10/S-2050

ROTARY SELECTOR SWITCHES

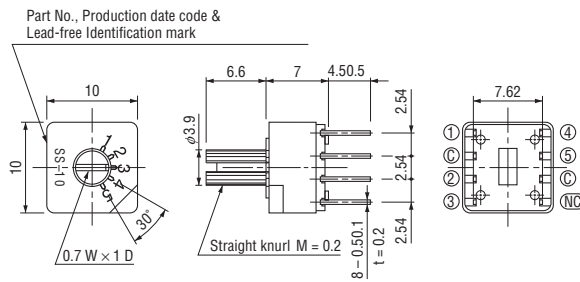
OUTLINE DIMENSIONS

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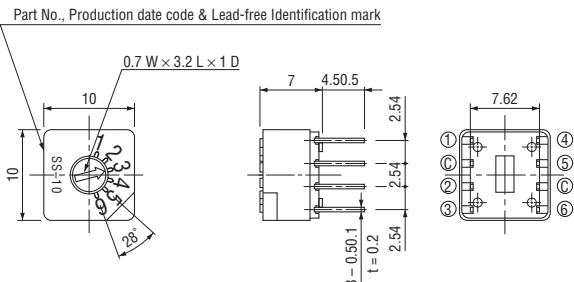
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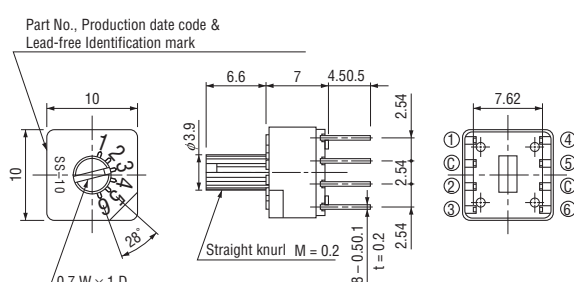
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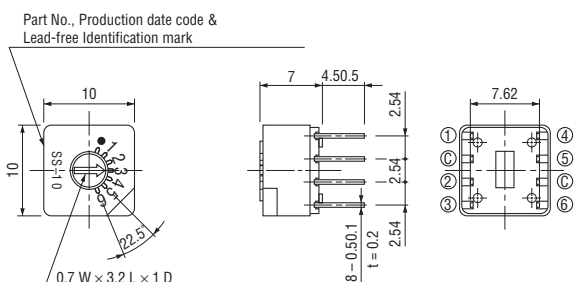
SS-10-16SP-AE



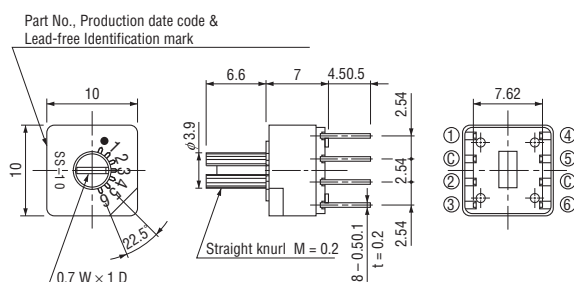
SS-10-16SP-L-AE



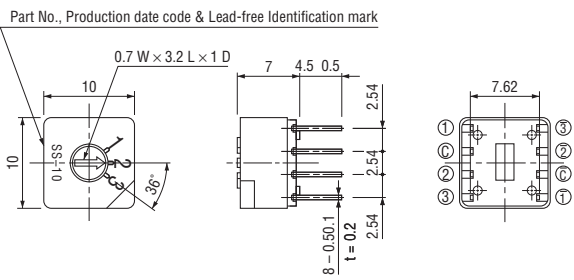
SS-10-16NP-E



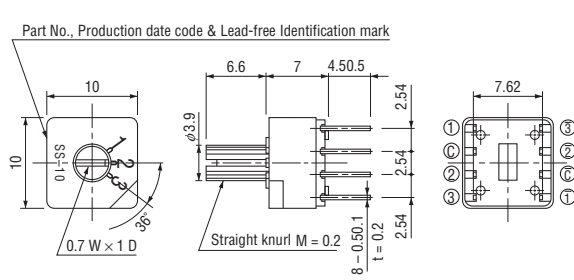
SS-10-16NP-L-E



SS-10-23NP-E



SS-10-23NP-L-E



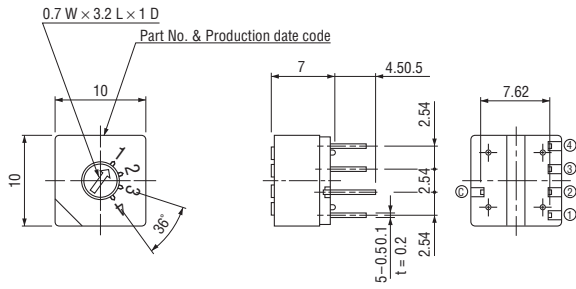
SS-10/S-2050

ROTARY SELECTOR SWITCHES

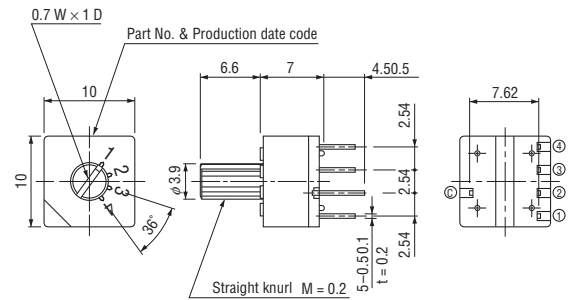
OUTLINE DIMENSIONS

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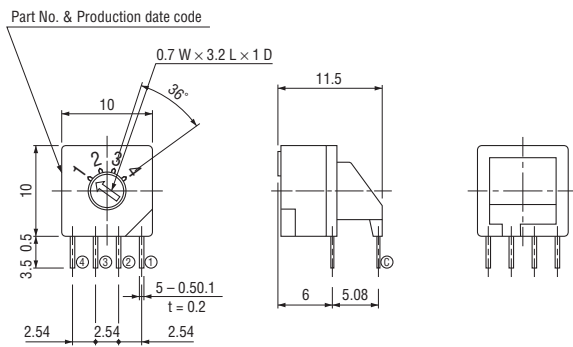
● S-2050



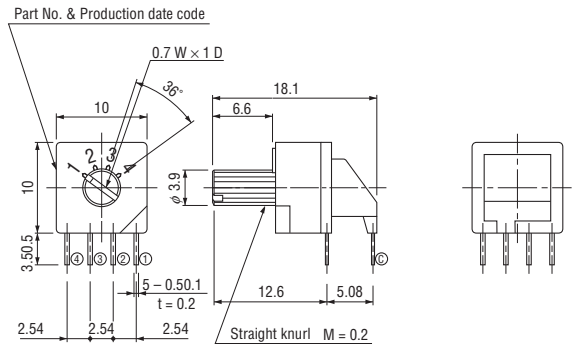
● S-2150



● S-2051



● S-2151

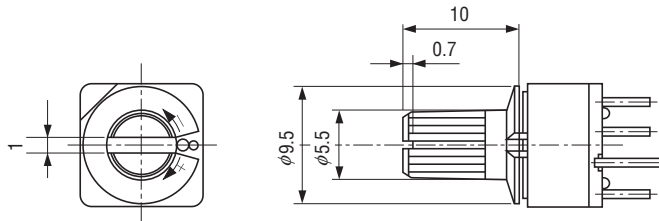


SS-10/S-2050

ROTARY SELECTOR SWITCHES

SWITCHES WITH KNOB AS EXTENDED SHAFT

(Unit: mm)



The large knob is common to S-1000A, S-2000A, SA-5000, and SS-10 series.

※ Knob can't be detached due to being fixed. Simple knob can't be sold.

PACKAGING SPECIFICATIONS

<Tray packaging specifications>

- Tray version is packaged in 50 pcs. per tray. Orders will be accepted for units of 50 pcs., i. e., 50, 100, 150 pcs. etc.
- Tray version is boxed with 10 trays.

<Bulk pack specifications>

- The smallest unit of bulk pack in a plastic bag is 10 pcs. per pack.
Orders will be accepted for unit of minimum 10 pcs., i.e., 10, 20, 30 pcs., etc.
- Boxing of bulk in a plastic bag is performed with 25 pcs. (standard 50 pcs.) per box.

<Note> : The switch with a large knob for manual adjustment is available as a semi-standard item.