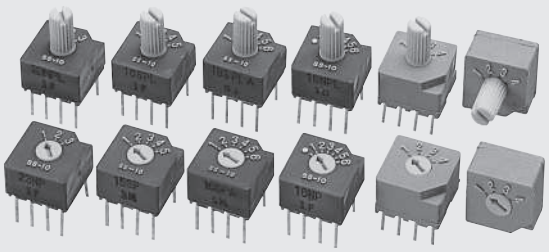
ROTARY SELECTOR SWITCHES SS-10/S-2050

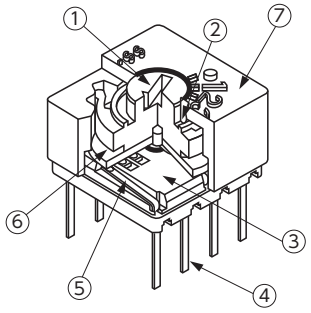
RoHS compliant



■ FEATURES

- RoHS compliant
- Compact-size DIP pin configuration
- Protected against dust and washable after soldering
- Self-cleaning mechanism
- Resin material is UL Recognized 94HB

INTERNAL STRUCTURE
SS-10 series



Part name		Material
①	Rotor	Polyoxymethylene
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
⑦	Housing	Polybutyleneterephthalate

■PART NUMBER DESIGNATION

SS-10 - 1 6 S P - L - A E W

Series name

No. of poles
1：1 pole
2：2 poles

No. of contacts
3：3 contacts (2 poles only)
5：5 contacts (1 pole only)
6：6 contacts (1 pole only)

Contact timing
N：Non-shorting (1pole 6 contacts with OFF, 2 poles 3 contacts)
S：Shorting (1 pole 5 contacts, 1 pole 6 contacts without OFF)

Setting position
P：Top setting

Shape of rotor
- L：With knob (extended shaft)
Blank：Without knob

Schematic ※1
- A：Without OFF position
Blank：With OFF position

Terminal pin
E：Au (Lead-free)

Form of packaging
W：Tray packaging
Blank：Plastic bag

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

S - 2 0 5 0 W

Series name

Shape of rotor
0：Without knob
1：With knob (extended shaft)

Setting position
0：Top setting
1：Side setting

Form of packaging
W：Tray packaging
Blank：Plastic bag

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

SS-10/S-2050
ROTARY SELECTOR SWITCHES

■LIST OF PART NUMBERS

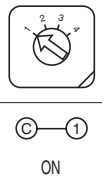
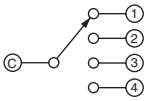
Circuit type		Shape		Form of packaging	Contact timing		Packaging quantity
					Non-shorting	Shorting	
1 pole 4 contacts		Top setting	Without knob	Tray packaging	S-2050W		50 pcs./tray
				Plastic bag	S-2050		25 pcs./pack
			With knob	Tray packaging	S-2150W		50 pcs./tray
				Plastic bag	S-2150		25 pcs./pack
		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-10-15SPEW	50 pcs./tray
				Plastic bag		SS-10-15SPE	25 pcs./pack
			With knob	Tray packaging		SS-10-15SP-LEW	50 pcs./tray
				Plastic bag		SS-10-15SP-LE	25 pcs./pack
1 pole 6 contacts	With OFF		Without knob	Tray packaging	SS-10-16NPEW		50 pcs./tray
				Plastic bagTray	SS-10-16NPE		25 pcs./pack
			With knob	packaging	SS-10-16NP-LEW		50 pcs./tray
				Plastic bagTray	SS-10-16NP-LE		25 pcs./pack
	Without OFF		Without knob	packaging		SS-10-16SP-AEW	50 pcs./tray
				Plastic bagTray		SS-10-16SP-AE	25 pcs./pack
			With knob	packaging		SS-10-16SP-L-AEW	50 pcs./tray
				Plastic bagTray		SS-10-16SP-L-AE	25 pcs./pack
2 poles 3 contacts			Without knob	packaging	SS-10-23NPEW		50 pcs./tray
				Plastic bagTray	SS-10-23NPE		25 pcs./pack
			With knob	packaging	SS-10-23NP-LEW		50 pcs./tray
				Plastic bag	SS-10-23NP-LE		25 pcs./pack

⍁ : Not manufactured

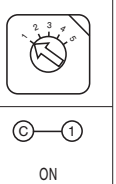
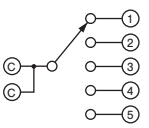
※ Verify the above part numbers when placing orders.
Tray version can be supplied only in tray nuits.

■SCHEMATIC DIAGRAMS

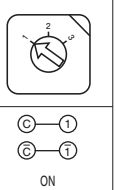
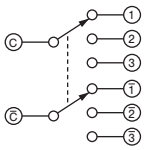
● 1 pole 4 contacts

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

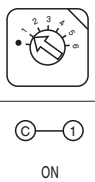
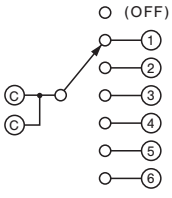
● 1 pole 5 contacts

Series	Switching specifications	Schematic
SS-10-15SPE SS-10-15SP-LE		

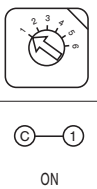
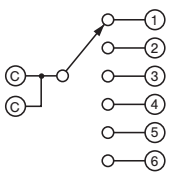
● 2 poles 3 contacts

Series	Switching specifications	Schematic
SS-10-23NPE SS-10-23NP-LE		

● 1 pole 6 contacts (With OFF)

Series	Switching specifications	Schematic
SS-10-16NPE SS-10-16NP-LE		

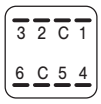
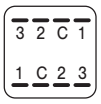
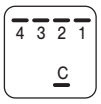
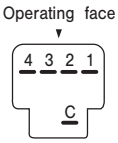
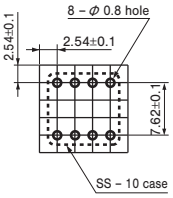
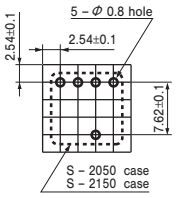
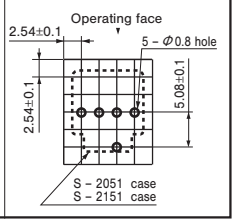
● 1 pole 6 contacts (Without OFF)

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 149, 150
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 mV1μA
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 / 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

{ } : Reference only

■ENVIRONMENTAL CHARACTERISTICS

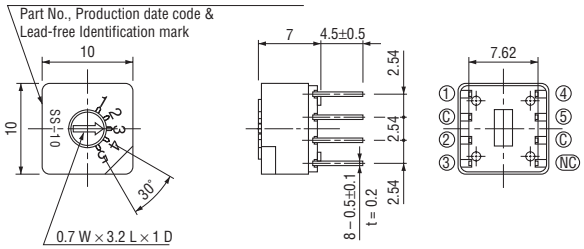
Vibration	(Amplitude) 1.5 mm or (Acceleration) 98 m/s^2, 10-500-10 Hz, 3 directions for 2 h each
Shock	490 m/s^2, 11 ms 6 directions for 3 times each
Humidity (Steady state)	40 °C, Relative humidity 90~95 %, 240 h
Load life	500 cycles minimum DC5 V, 100 mA
High temperature exposure	70 °C, 240 h
Low temperature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

SS-10/S-2050
ROTARY SELECTOR SWITCHES

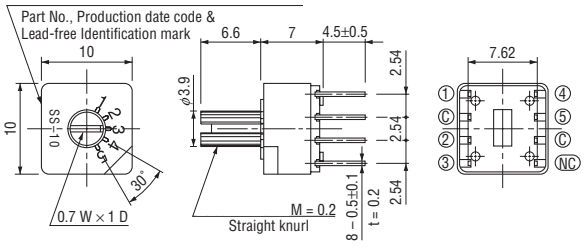
■OUTLINE DIMENSIONS

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

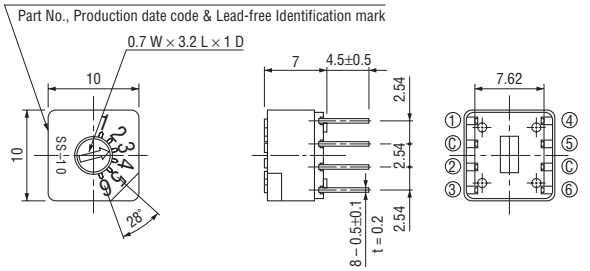
● SS-10-15SPE



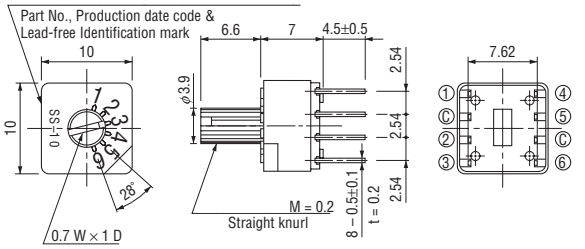
● SS-10-15SP-LE



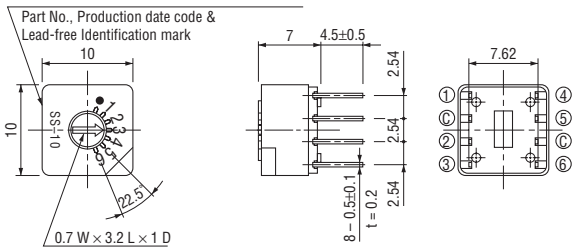
● SS-10-16SP-AE



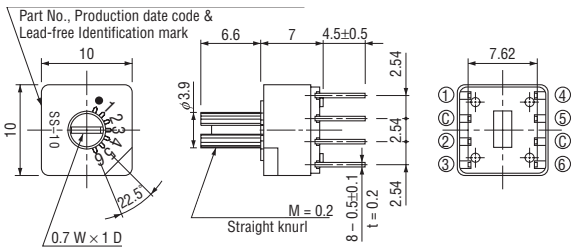
● SS-10-16SP-L-AE



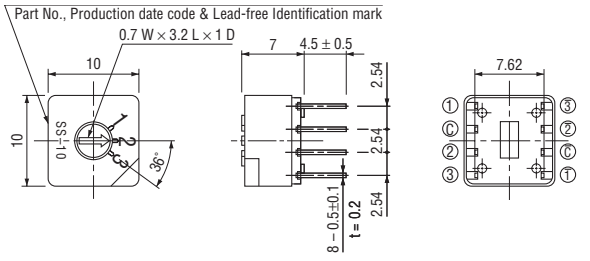
● SS-10-16NPE



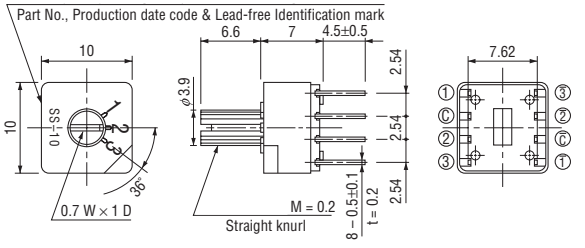
● SS-10-16NP-LE



● SS-10-23NPE



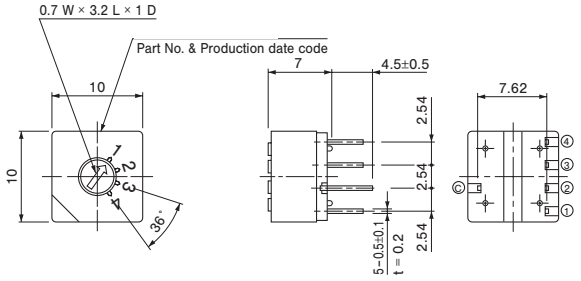
● SS-10-23NP-LE



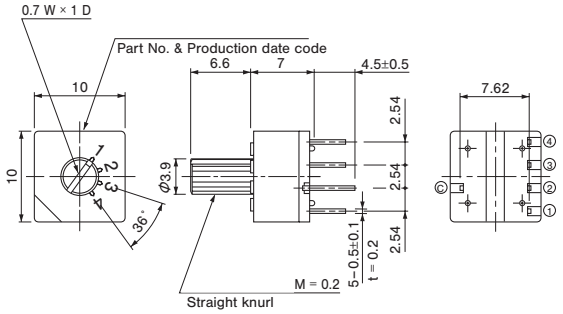
■OUTLINE DIMENSIONS

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

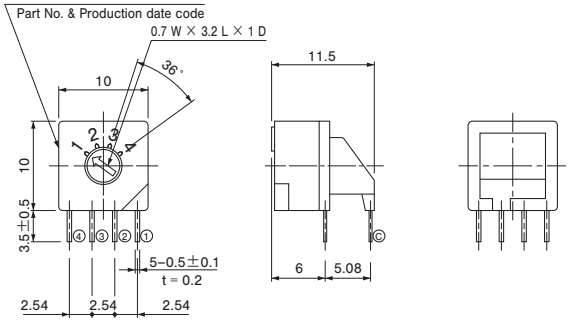
● S-2050



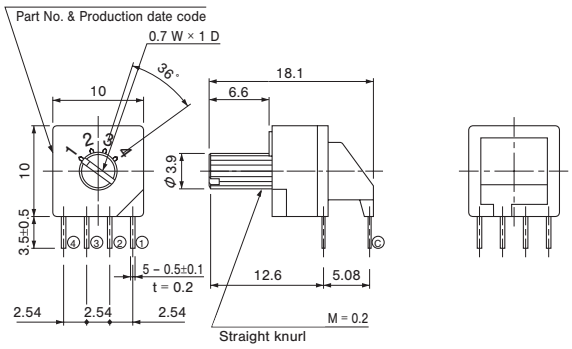
● S-2150



● S-2051



● S-2151



■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>

- Boxing of bulk in a plastic bag is performed with 25 pcs. (standard 50 pcs.) per box.