

General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver):	0.1A @ 30V DC
Logic Level (gold):	0.4VA maximum @ 28V AC/DC maximum (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
	Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance:	20 milliohms maximum for power level; 40 milliohms maximum for logic level
Insulation Resistance:	100 megohms minimum @ 500V DC
Dielectric Strength:	500V AC minimum 1 minute minimum
Mechanical Life:	10,000 operations minimum
Electrical Life:	10,000 operations minimum
Contact Timing:	SS12S & SS22S – Shorting (make-before-break)
Total Travel:	.079" (2.0mm)

Materials & Finishes

Actuator:	Polyamide
Upper Case:	Polyester for 3-On models; polyacetal for all other models
Lower Case:	Glass fiber reinforced polyester for 3-On models; glass fiber reinforced polybutylene terephthalate (thermoplastic) for other models
Movable Contactor:	Phosphor bronze with silver plating (code 2) or phosphor bronze with gold plating (code 4)
Interior Base:	Phenolic resin (thermoset)
Terminals:	Brass with silver plating over copper plating or brass with gold plating

Environmental Data

Operating Temp Range:	-15°C through +60°C (+5°F through +140°F)
Humidity:	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration:	10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock:	50G (490m/s ²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

PCB Processing

Soldering:	Wave Soldering: For non-supported through-hole, see Profile B in Supplement section. For supported through-hole, 5 seconds maximum @ 250°C maximum. Manual Solder: See Profile B in Supplement section.
Cleaning:	These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

The SS series devices have not been tested for UL recognition and CSA certification. These switches are designed for use in a low-voltage, low-current circuit. When used as intended in a low-voltage, low-current circuit, the results do not produce hazardous energy.

Distinctive Characteristics

Top or side actuation permits flexible board design.

Compact dimensions and low profile allow high density mounting and close stacking of PC boards.

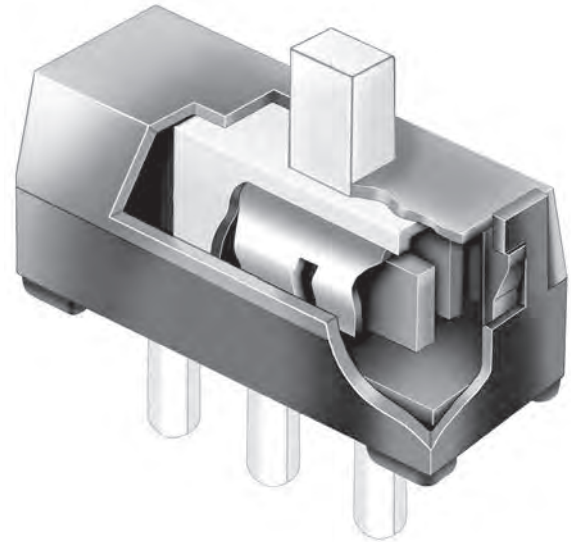
Crisp actuation positively indicates circuit status.

Double molded thermoset base and thermo-plastic housing prevent loosening of terminals due to high soldering temperatures.

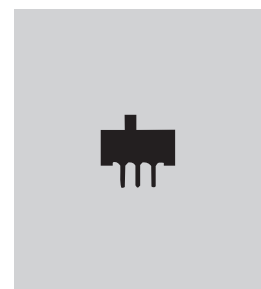
Award-winning STC mechanism with benefits unavailable in conventional mechanisms: smoother, positive detend actuation, increased contact stability, and unparalleled logic-level reliability. (Additional STC details in Terms and Acronyms in the Supplement section.)

Insert molded terminals lock out flux, solvents, and other contaminants.

Inch or metric terminal spacing for standard PC board grid (.100" x .100" or 2.0mm x 2.0mm).



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

SS

12S

D

P

2

Poles & Circuits

12S	SPDT	ON	NONE	ON
SS12S model has shorting contacts.				
*14M	SP3T	ON	ON	ON
22S	DPDT	ON	NONE	ON
SS22S model has shorting contacts.				
See Poles & Circuits chart below.				
* 14M Circuit with silver contacts only.				

Terminal Spacing

B	Metric 2.0mm x 2.0mm
D	Inch .100" x .100"

Contact Material & Ratings

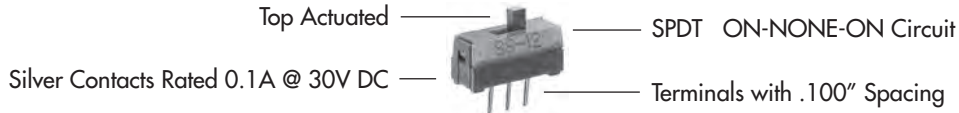
2	Silver Rated 0.1A @ 30V DC
*4	Gold Rated 0.4VA maximum @ 28V AC/DC maximum
* Gold not available with SS14M.	

Actuation

P	Top Actuated
H	Side Actuated

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SS12SDP2



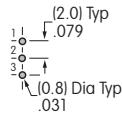
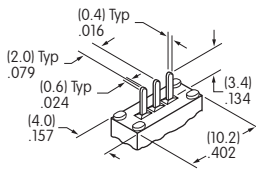
POLES & CIRCUITS

Pole	Model	Slide Position			Connected Terminals			Throw & Schematics
		Right	Center	Left	Right	Center	Left	
SP	SS12S	ON	NONE	ON	2-1	NONE	2-3	SPDT
SP	SS14M	ON	ON	ON	3-4	3-2	3-1	SP3T
DP	SS22S	ON	NONE	ON	2-1 5-4	NONE	2-3 5-6	DPDT

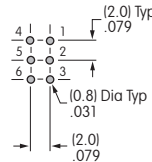
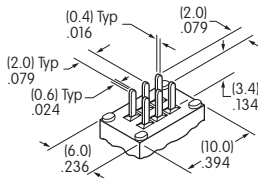
Note: Terminal numbers are not actually on switch.

TERMINAL SPACING

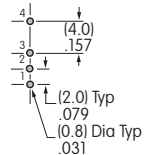
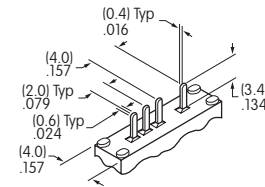
B Metric 2.0mm x 2.0mm with Black Base



On-None-On Single Pole Models

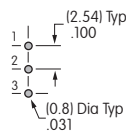
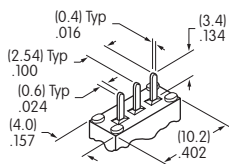


On-None-On Double Pole Models

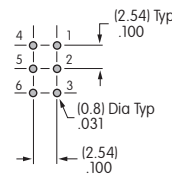
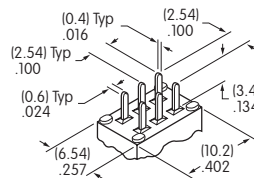


3-On Models

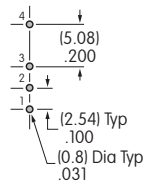
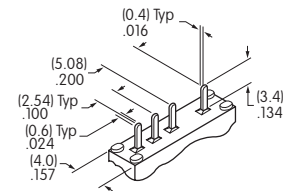
D Inch .100" x .100" with Gray Base



On-None-On Single Pole Models



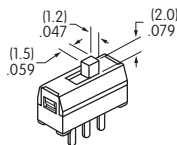
On-None-On Double Pole Models



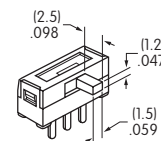
3-On Models

ACTUATION

P Top Actuated



H Side Actuated



CONTACT MATERIALS & RATINGS

2 Silver over Phosphor Bronze

Power Level

0.1A @ 30V DC

4 Gold over Silver/Phosphor Bronze

Logic Level

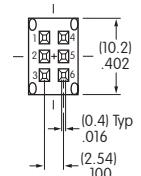
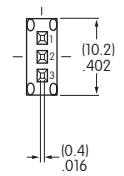
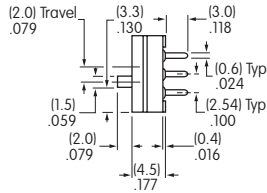
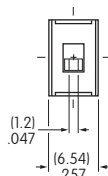
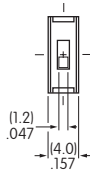
0.4VA max @ 28V AC/DC max

Complete explanation of operating range in Supplement section.

TYPICAL SWITCH DIMENSIONS

Top Actuated

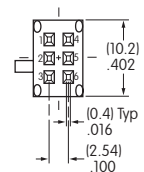
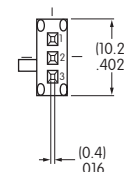
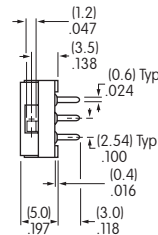
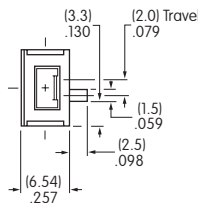
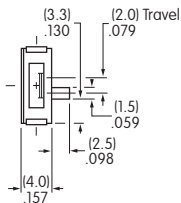
Single & Double Pole



SS12SDP2

Side Actuated

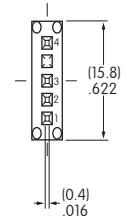
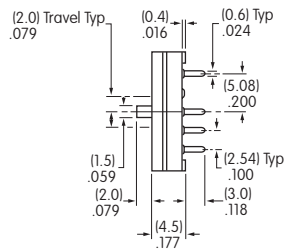
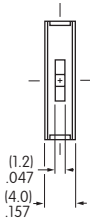
Single & Double Pole



SS12SDH2

3-On Circuit • Top Actuated

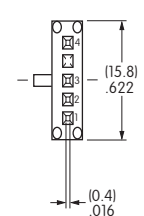
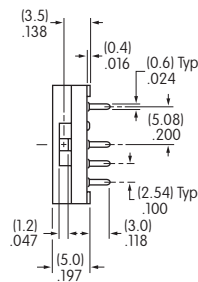
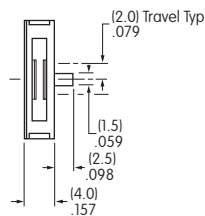
Single Pole



SS14MDP2

3-On Circuit • Side Actuated

Single Pole



SS14MDH2

Distinctive Characteristics

Top or side actuation permits flexible board design.

Bright, LED illumination at tip of actuator.

Compact dimensions and low profile allow high density mounting and close stacking of PC boards.

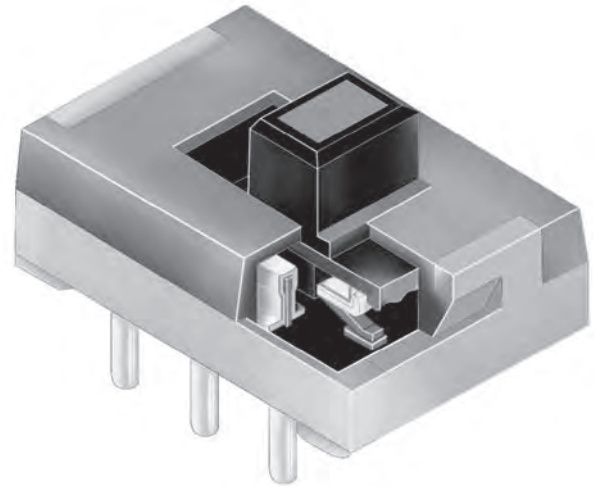
Crisp actuation positively indicates circuit status.

Double molded thermoset base and thermoplastic housing prevent loosening of terminals due to high soldering temperatures.

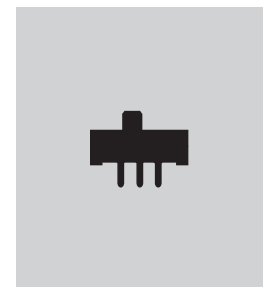
Sliding twin contact mechanism with self-cleaning action provides smooth actuation and produces high contact reliability.

Insert molded terminals lock out flux, solvents, and other contaminants.

Inch terminal spacing for standard PC board grid (.100" x .100").



Actual Size



General Specifications

Electrical Capacity (Resistive Load)

Power Level: 0.1A @ 30V DC

Other Ratings

Contact Resistance: 20 milliohms maximum
Insulation Resistance: 100 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum 1 minute minimum
Mechanical Life: 10,000 operations minimum
Electrical Life: 10,000 operations minimum
Contact Timing: Shorting (make-before-break)
Total Travel: .079" (2.0mm)

Materials & Finishes

Actuator: Polyacetal
Upper Case: Polyacetal
Lower Case: Glass fiber reinforced polyester
Movable Contactor: Phosphor bronze with silver plating
Interior Base: Phenolic resin (thermoset)
Terminals: Brass with silver plating over copper plating

Environmental Data

Operating Temp Range: -15°C through +60°C (+5°F through +140°F)
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

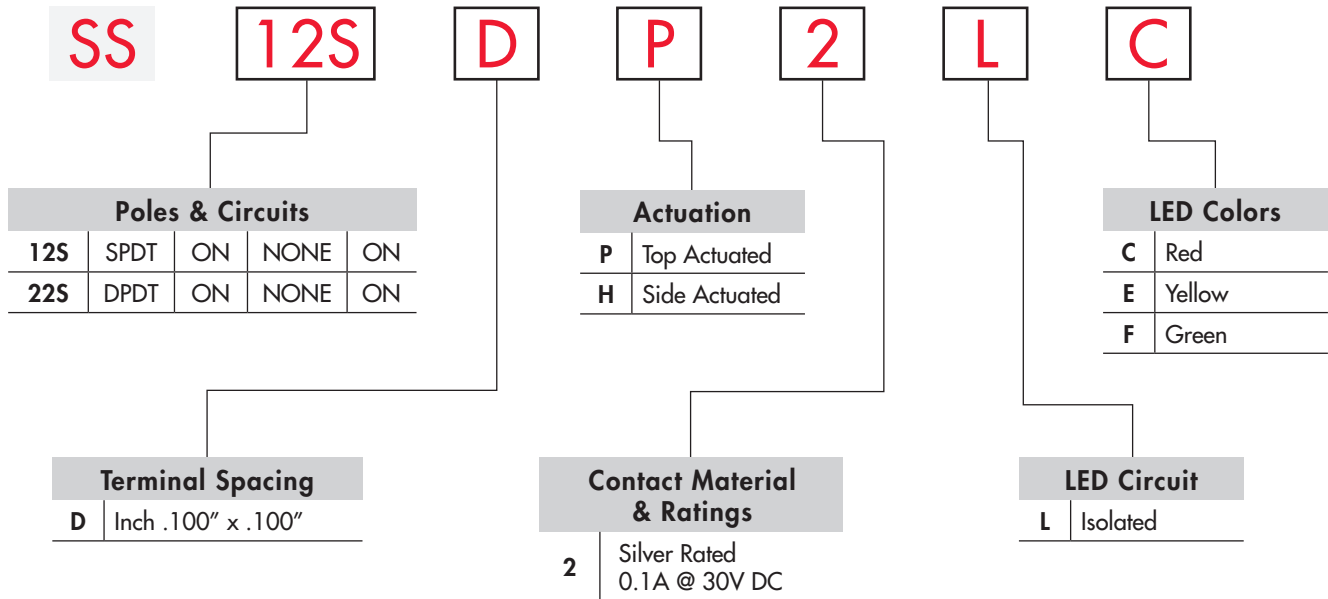
PCB Processing

Soldering: Wave Soldering: For non-supported through-hole, see Profile B in Supplement section. For supported through-hole, 5 seconds maximum @ 250°C maximum.
 Manual Soldering: See Profile B in Supplement section.
Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

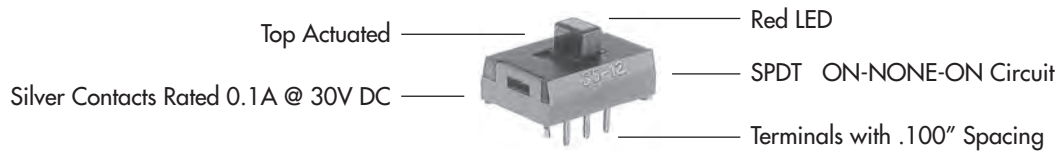
The SS series devices have not been tested for UL recognition and CSA certification. These switches are designed for use in a low-voltage, low-current circuit. When used as intended in a low-voltage, low-current circuit, the results do not produce hazardous energy.

TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SS12SDP2LC



POLES & CIRCUITS

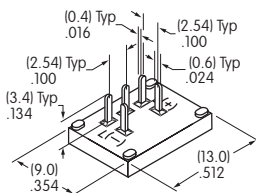
Pole	Model	Slide Position			Connected Terminals			Throw & Schematics
		Right	Center	Left	Right	Center	Left	
SP	SS12S	ON	NONE	ON	2-1	NONE	2-3	SPDT
DP	SS22S	ON	NONE	ON	2-1 5-4	NONE	2-3 5-6	DPDT

Note: Terminal numbers are not actually on switch. Isolated LED circuit requires external power source.

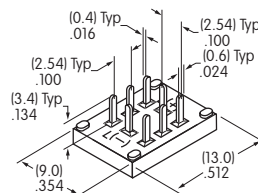
TERMINAL SPACING

D Inch .100" x .100"

Single Pole Models



Double Pole Models



CONTACT MATERIALS & RATINGS

2

Silver over Phosphor Bronze

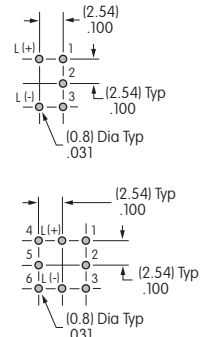
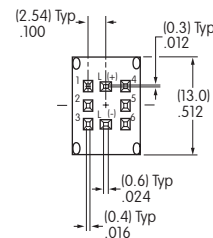
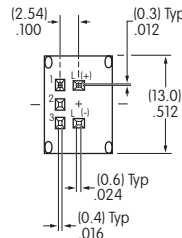
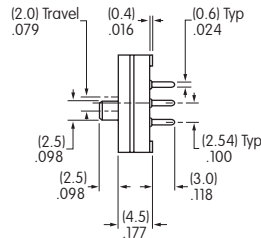
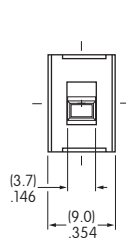
Power Level

0.1A @ 30V DC

TYPICAL SWITCH DIMENSIONS

Top Actuated

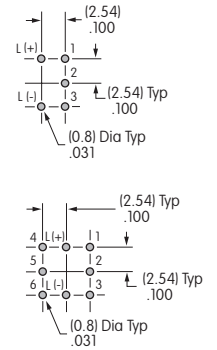
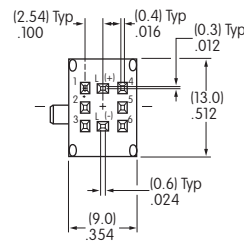
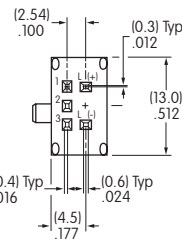
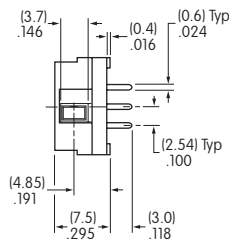
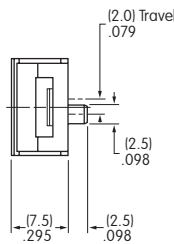
Single & Double Pole



SS22SDP2LC

Side Actuated

Single & Double Pole




SS12SDH2LC

LED COLORS & SPECIFICATIONS

LEDs are supplied as an integral part of the switch (not available separately). The lamp circuit is independent of switch operation. Electrical specifications shown are determined at a basic temperature of 25°C.

If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula given in the Supplement.

L Isolated, 1-element 	Color	C	E	F
		Red	Yellow	Green
Maximum Forward Current	I_{FM}	30mA	30mA	25mA
Typical Forward Current	I_F	16mA	16mA	16mA
Forward Voltage	V_F	1.98V	2.06V	2.16V
Maximum Reverse Voltage	V_{RM}	5V	5V	5V
Current Reduction Rate Above 25°C	ΔI_F	0.40mA/°C	0.42mA/°C	0.33mA/°C
Ambient Temperature Range		-15° ~ +60°C		

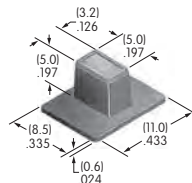
OPTIONAL CAP

AT4065 Slide Cap

Material: Polycarbonate

Cap can be assembled on request

Cap Color: Black only



Window color should match LED color.

Colors Available:

C Red E Yellow F Green