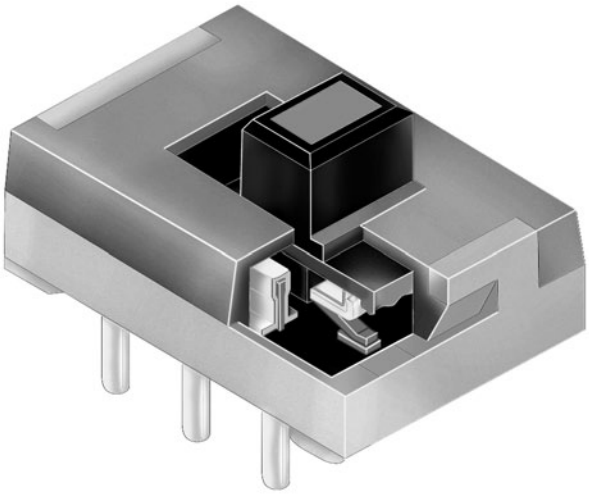
# Distinctive Characteristics

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.

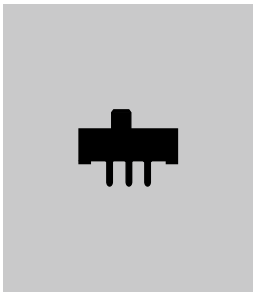
Double molded thermoset base and thermoplastic housing prevent loosening of terminals due to high soldering temperatures.

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/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 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

SS | 12S | D | P | 2 | L | C

**Poles & Circuits**

| | | | | |
|---|---|---|---|---|
| 12S | SPDT | ON | NONE | ON |
| 22S | DPDT | ON | NONE | ON |

**Actuation**

| | |
|---|---|
| P | Top Actuated |
| H | Side Actuated |

**LED Colors**

| | |
|---|---|
| C | Red |
| E | Yellow |
| F | Green |

**Terminal Spacing**

| | |
|---|---|
| D | Inch .100" x .100" |

**Contact Material & Ratings**

| | |
|---|---|
| 2 | Silver Rated 0.1A @ 30V DC |

**LED Circuit**

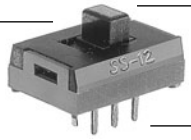
| | |
|---|---|
| L | Isolated |

### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**SS12SDP2LC**

Top Actuated

Silver Contacts Rated 0.1A @ 30V DC

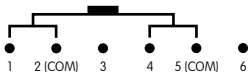



Red LED

SPDT ON-NONE-ON Circuit

Terminals with .100" Spacing

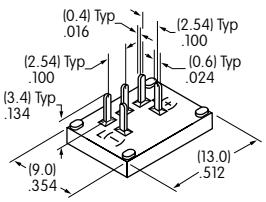
## POLES & CIRCUITS

| | | Slide Position | | | Connected Terminals | | | Throw & Schematics |
|---|---|---|---|---|---|---|---|---|
| Pole | Model | Right | Center | Left | Right | Center | Left | Note: Terminal numbers are not actually on switch. Isolated LED circuit requires external power source. |
| 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  |

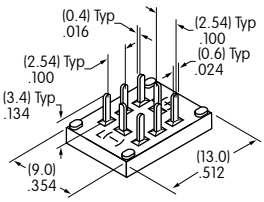
## TERMINAL SPACING

**D** Inch .100" x .100"

Single Pole Models




Double Pole Models

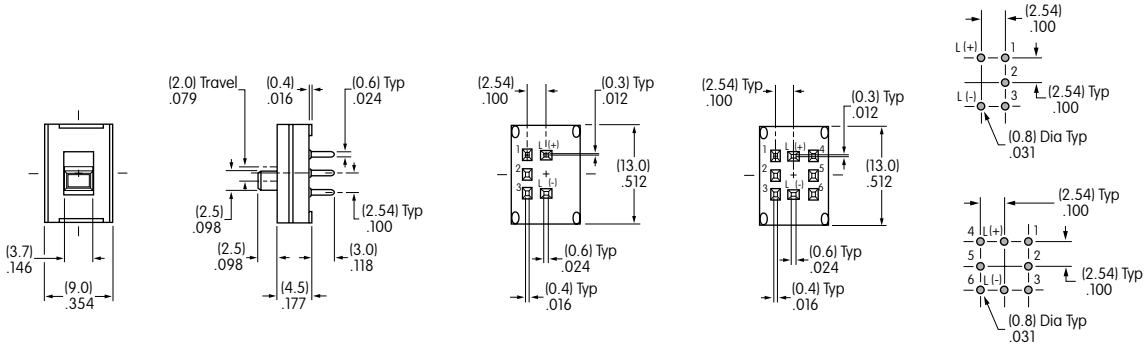


## CONTACT MATERIALS & RATINGS

**2** **Silver over Phosphor Bronze** **Power Level** **0.1A @ 30V DC**

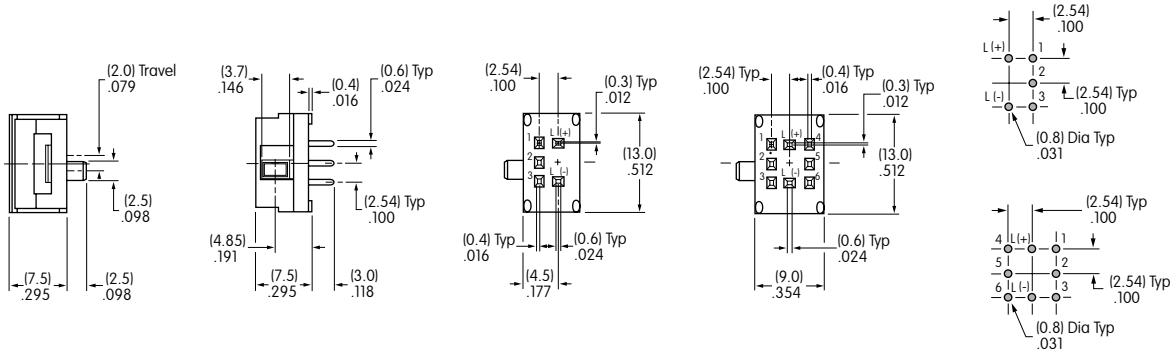
## TYPICAL SWITCH DIMENSIONS

### Single & Double Pole — Top Actuated



**SS22SDP2LC**

### Single & Double Pole — Side Actuated



**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** Red | **E** Yellow | **F** Green |
|---|---|---|---|---|
| Forward Peak Current | $I_{FM}$ | 30mA | 30mA | 25mA |
| Typical Forward Current | $I_F$ | 16mA | 16mA | 16mA |
| Forward Voltage | $V_F$ | 1.98V | 2.06V | 2.16V |
| Reverse Peak Voltage | $V_{RM}$ | 5V | 5V | 5V |
| Current Reduction Rate Above 25°C | $\Delta I_F$ | 0.40mA/°C | 0.42mA/°C | 0.33mA/°C |
| Ambient Temperature Range | | −15° ~ +60°C | | |

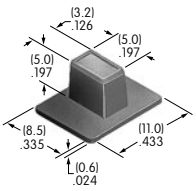
## OPTIONAL CAP

**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

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

**Как с нами связаться**

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