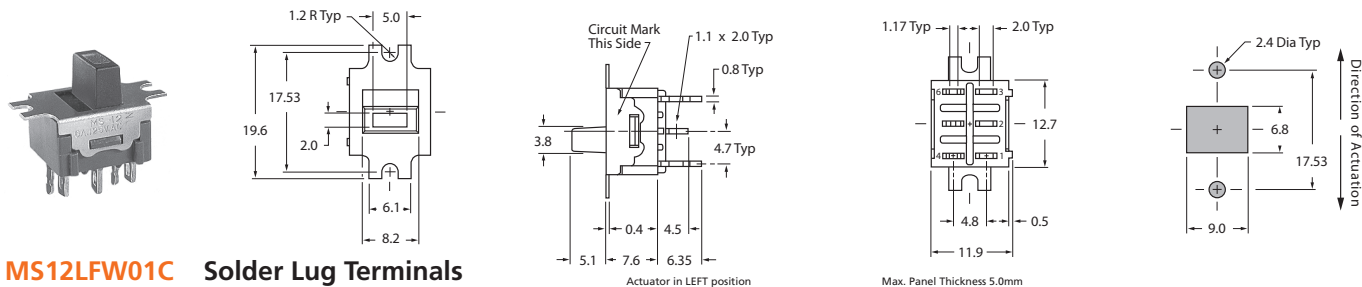


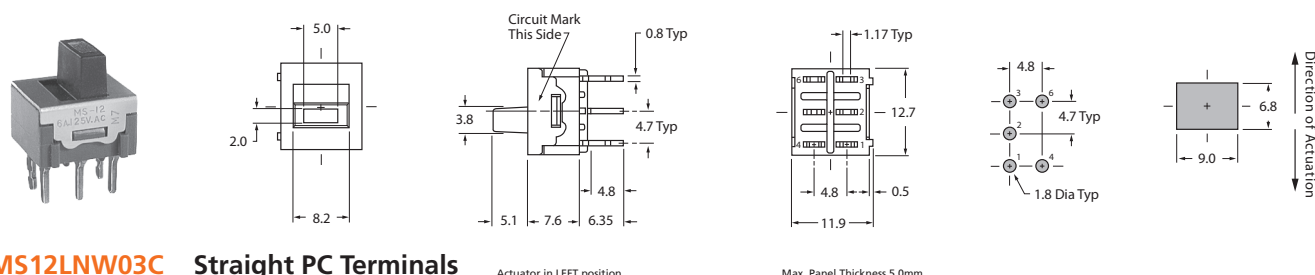
Illuminated Switches

Miniature Illuminated Slide Switches

MS Series



MS12LFW01C Solder Lug Terminals

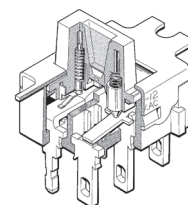


MS12LNW03C Straight PC Terminals

POLES & CIRCUITS

Pole	Model	Slide Position			Connected Terminals			Throw & Schematics
		Left	Center	Right	Left	Center	Right	
								Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external connection.
SP	MS12 MS13	ON ON	NONE OFF	ON ON	2-1	OPEN	2-3	

CUTAWAY



MOUNTING TYPES & TERMINALS

	<p>Epoxy Seal Thk = 0.8 Typ</p>		<p>Epoxy Seal Thk = 0.8 Typ</p>
N Straight PC Mount (Combines with Straight PC Terminal 03 only)	03 Straight PC	F 2-screw Flange (Combines with Solder Lug Terminals 01 only)	01 Solder Lug The 1.1x2.0mm oblong hole accommodates 1 solid 18-gg wire or 2 solid or stranded 20-gg wires.

How to order:

MS

- | | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 1 POLE:
1 SPDT | 5 CONTACT MATERIAL & RATING:
W Silver; Rated 6A @ 125V AC & 3A @ 250V AC |
| 2 CIRCUIT:
2 ON-NONE-ON
3 ON-OFF-ON | 6 TERMINAL:
01 Solder Lug
03 Straight PC |
| 3 ILLUMINATION:
L LED Lighted | 7 LEDS:
C Red
E Yellow
F Green |
| 4 MOUNTING:
N For Straight PC (Terminal 03 only)
F With 2-screw Flange (Terminal 01 only) | |

LED COLORS & SPECIFICATIONS

	Colors	C Red	E Yellow	F Green
Forward Peak Current	I_{FM}	20mA	20mA	20mA
Continuous Forward Current	I_F	16mA	16mA	16mA
Forward Voltage	V_F	2.07V	2.15V	2.16V
Reverse Peak Voltage	V_{RM}	3V	4V	4V
Current Reduction Rate Above 25°C	ΔI_F	0.27mA/°C		
Ambient Temperature Range		-10°C ~ +55°C		

General Specifications:

ELECTRICAL CAPACITY (Resistive Load)

» Power Level: 6A @ 125VAC or 3A @ 250VAC

OTHER RATINGS:

- » Contact Resistance: 10mΩ max.
- » Insulation Resistance: 1,000MΩ min. @ 500VDC
- » Mechanical Life: 50,000 operations min.
- » Electrical Life: 25,000 operations min.
- » Total Travel: 2.2mm

MATERIALS

- » Movable Contacts: Silver alloy
- » Stationary Contacts: Silver capped copper with silver plating
- » Terminals: Copper or brass with silver plating

ENVIRONMENTAL DATA

- » Operating Temperature: -10°C through +55°C

SOLDERING

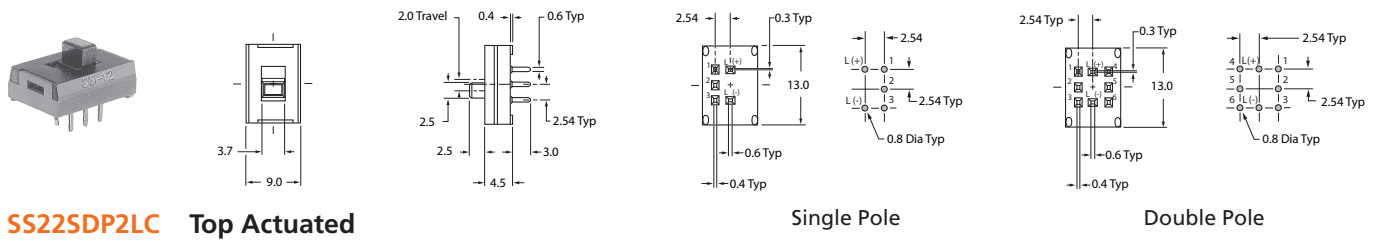
- » Wave soldering recommended.
- » Manual Soldering for ON-NONE-ON: 4 sec. max. @ 390°C max.
- » Manual Soldering for ON-OFF-ON (in OFF position only): 4 sec. max. @ 410°C max.



Illuminated Switches

Ultra-Miniature Illuminated Slide Switches

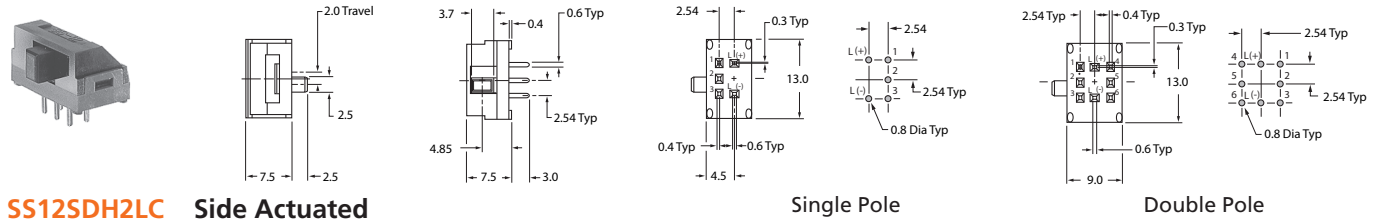
SS Series



SS22SDP2LC Top Actuated

Single Pole

Double Pole



SS12SDH2LC Side Actuated

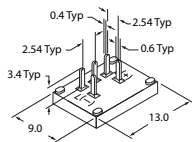
Single Pole

Double Pole

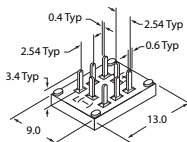
POLES & CIRCUITS

		Slide Position			Connected Terminals			Throw & Schematics	
Pole	Model	Right	Center	Left	Right	Center	Left	Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external power source.	
SP	SS12S	ON	NONE	ON	2-1	OPEN	2-3	SPDT	
DP	SS22S	ON	NONE	ON	2-1 5-4	OPEN	2-3 5-6	DPDT	

TERMINAL SPACING

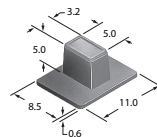


Single Pole



Double Pole

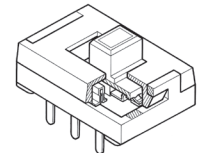
OPTIONAL CAP



Material: Polycarbonate
Cap can be assembled on request
Cap Color: Black only.

Window color should match LED color.

CUTAWAY



Illuminated Switches

How to order:

SS

1 POLES & CIRCUITS:
12S SPDT ON-NONE-ON
22S DPDT ON-NONE-ON

2 TERMINAL SPACING:
D 2.54mm x 2.54mm

3 ACTUATION:
P Top Actuated
H Side Actuated

4 CONTACT MATERIAL & RATINGS:
2 Silver Rated 0.1A@30VDC

5 LED CIRCUIT:
L Isolated

6 LED COLORS:
C Red
E Yellow
F Green

LED COLORS & SPECIFICATIONS

L Isolated LED, 1-element		Colored Toggle Bright LED			
		Colors	C Red	E Yellow	F Green
Forward Peak Current	I_{FM}		20mA	20mA	20mA
Continuous Forward Current	I_F		16mA	16mA	16mA
Forward Voltage	V_F		2.07V	2.15V	2.16V
Reverse Peak Voltage	V_{RM}		3V	4V	4V
Current Reduction Rate Above 25°C	ΔI_F		0.27mA/°C		
Ambient Temperature Range			-15°C ~ +60°C		

General Specifications:

ELECTRICAL CAPACITY (Resistive Load)

» Power Level: 0.1A@30VDC

OTHER RATINGS:

- » Contact Resistance: 20mΩ max.
- » Insulation Resistance: 100MΩ min.@500VDC
- » Mechanical Life: 10,000 operations min.
- » Electrical Life: 10,000 operations
- » Contact Timing: Shorting (make-before-break)
- » Total Travel: 2.0mm

MATERIALS

- » Mov. Contacts: Phosphor bronze with silver plating
- » Terminals: Brass with silver plating over copper plating

ENVIRONMENTAL DATA

- » Operating Temperature: -15°C through +60°C

SOLDERING

- » 3 sec. max. @ 350°C max. for manual soldering;
- 5 sec. max. @ 270°C max. for wave soldering

nikkai