

# DATA SHEET

**SUNGMUN CODE :** NSI-21S  
**DESCRIPTION :** MINI SLIDE SWITCH

## SUNGMUN ELECTRONICS CO.. LTD,

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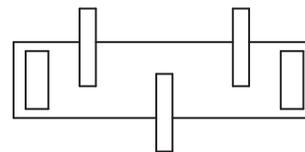
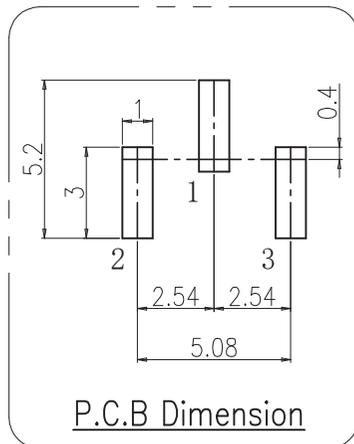
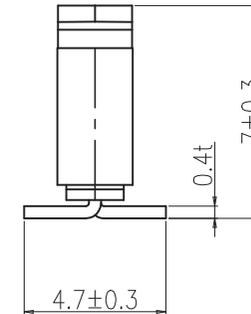
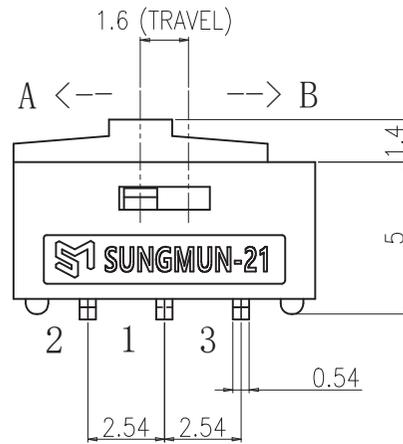
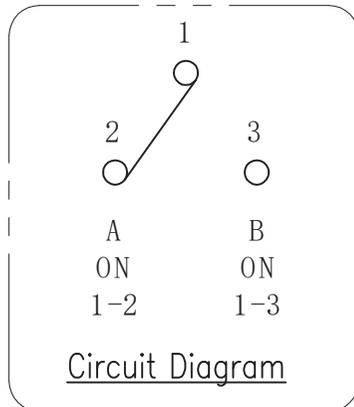
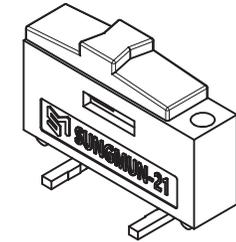
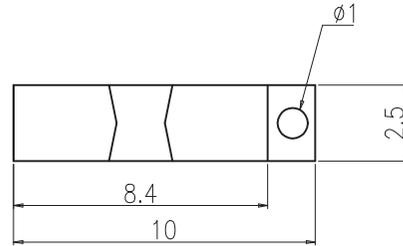


**SUNGMUN**  
ELECTRONICS

REV NO.	DATE	REVISION	DR	CH	APP
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# SPECIFICATION

1. Rating : DC12V 0.5A~24V 0.3A.
2. Contact Resistance : 80mΩ Max.
3. Travel : 1.6mm.
4. Operating Force : 250gf ± 150gf.
5. Life Cycle : 2,000 Cycle (with load).
6. Packing : 200pcs Vinyl Bag / 700pcs Reel Packing



01	-	-	-	-					
NO.	DESCRIPTION	MATERIAL	COLOR / FINISH	REMARK					
DRAW /DESIGNED	CHECKED	APPROVED	G.TOL	TITLE					
K.N KM	W .J LEE	K.I LEE	--	M INISLIDE SW ITCH					
D in ISO-2768-1m		UNIT	SCALE	MODEL NO.					
Ranges	0.5~3	3~6	6~30	30~120	120~400	mm	N.S	NSI-21S	REV.
Tolerance	±0.1	±0.1	±0.2	±0.3	±0.5	SIZE	A4	NSI-21S-01	01

D in ISO-2768-1m					
Ranges	0.5~3	3~6	6~30	30~120	120~400
Tolerance	±0.1	±0.1	±0.2	±0.3	±0.5

SUNGM UN ELECTRONICS CO.,LTD

## 1. Electrical Characteristics :

- 1.1 Rating : AC, DC 12V 0.5A~24V 0.3A (Minimum current: 1mA)
- 1.2 Contact Resistance : Max 30 mΩ
- 1.3 Insulation Resistance : Min 10,000 MΩ at DC 500V
- 1.4 Withstanding Voltage : 1min at AC 500V

## 2. Mechanical Characteristics :

- 2.1 Operating Force : 250gf ± 150gf
- 2.2 Travel : 1.6mm
- 2.3 Insulator :
  - 2.3.1 Case : Glass Fiber resin
  - 2.3.2 Slide : Glass Fiber resin
- 2.4 Terminal : Nickel, Gold Plate

## 3. Life Test :

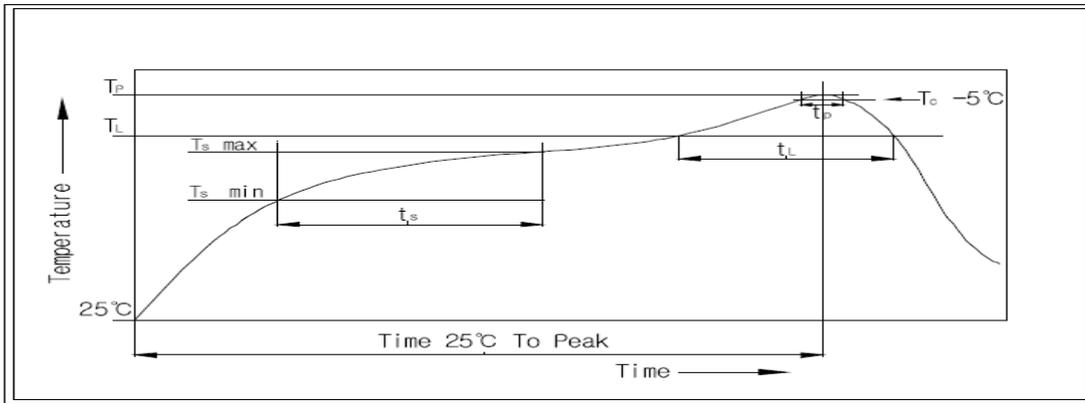
- 3.1 Test Condition : Operations at a rate of 15-20 cycles in 1 minute
  - 3.1.1 With load : 2,000 cycles
  - 3.1.2 Without load : 10,000 cycles
- 3.2 Operating Force : With +40%, -40% of Initial Value
- 3.3 Contact Resistance : Max 200mΩ

## 4. Environmental Characteristics :

- 4.1 Operating Temperature : -40°C to +85°C
- 4.2 Storage Temperature : -40°C to +85°C
- 4.3 Humidity Test :
  - 4.3.1 Test Conditions : Measured 1hour after exposure to ambient  
After 96hours exposure at 40±2°C, 90-95% R.H
  - 4.3.2 Insulation Resistance : Min 100MΩ, at DC 500V
  - 4.3.3 Withstanding Voltage : 1min at AC 250V

## 5. Solder Conditions :

- 5.1 Hand Solder : 3~4 sec. at 350°C (Dipping type)
- 5.2 Wave Solder : 5 sec. at 260°C (Dipping type)
- 5.3 Reflow Solder (SMD type)



### 5.3.1 Condition for Soldering

Profile Feature	Pb-Free Assembly
Average Ramp-UP Rate(Ts max to TP)	3°C/second max
Preheat	
- Temperature Min(Ts min)	150°C
- Temperature Max(Ts max)	200°C
- Time (ts min to ts max)	60-180seconds
Time maintained above:	
- Temperature (TL)	217°C
- Time (tL)	60-150seconds
Peak/Classification Temperature(TP)	260°C +0°C/ -5°C
Time within 5°C of actual Peak Temperature(TP)	5~10 seconds
Ramp-Down Rate	6°C/sec max
Time 25°C to Peak Temperature	8 minutes max