

OUTLINE OF CHANGES ON THE DOCUMENT				
Version	Description	Page of modification	Issue by	Issue date
A	First released	-	Polly	2025.05.23

| SPECIFICATION FOR MINIATURE TOGGLE SWITCHES |

ATTENTION	
<i>Customer shall acknowledge the datasheet by returning "this cover page with authorized signature" before placing order. Lack of acknowledgement or additional response constitutes acceptance of the herein contents.</i> 下單前請將此份"規格書封面簽回",未簽回則視為承認本規格書內容.	
Approved By	Entered Date



CUSTOMER:	_____
PART NO.:	_____
TAIWAY P/N.:	100-SP4-T100B1M1Q0 1MS4T1B1M1Q0
DATE OF ISSUE:	2025 Jul. 28
ISSUE BY:	Polly Li
APPROVED BY:	Amy Yen

1. Style

This specification describes “Miniature Toggle Switches”, mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

Operating Temperature Range : -40 °C~+85°C.

2. Contact Rating:

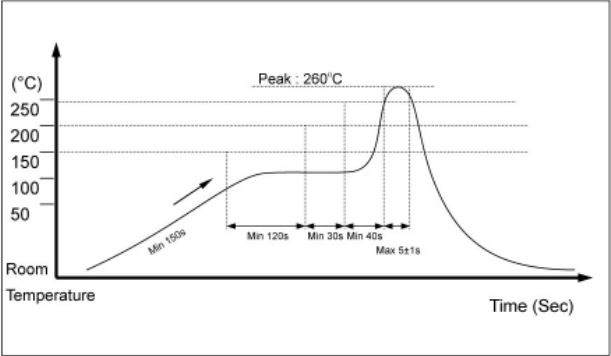
Silver Plating Standard :

Plating		Rating
Q=Silver	Fixed Terminal : Silver plated over copper alloy.	5Amps @120VAC or 28VDC. 2Amps @250VAC.
	Movable contact : Silver plated over copper alloy.	

3.Type of Actuation: Miniature Toggle Switches.

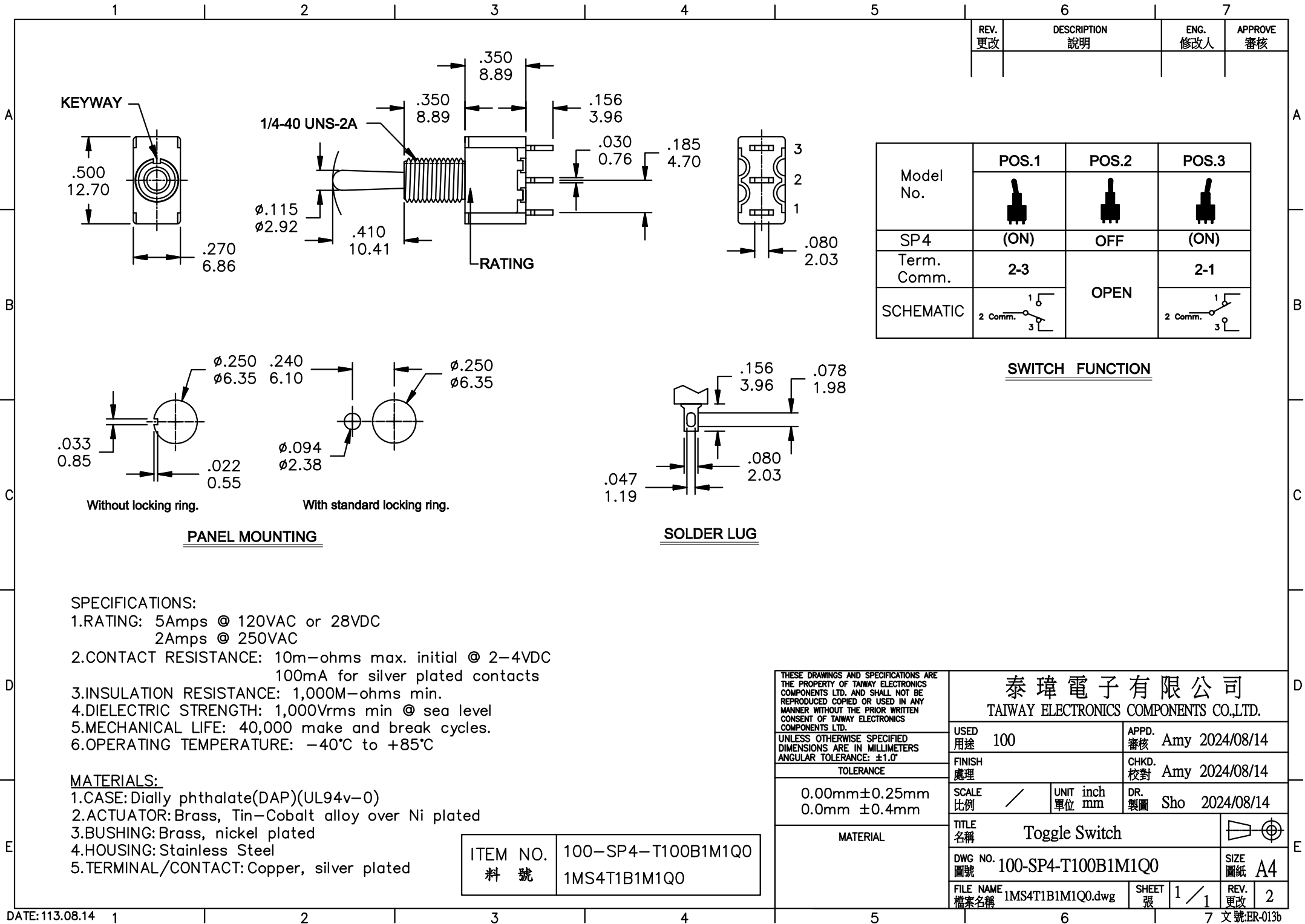
4. Test Sequence:

ELECTRIC PERFORMANCE	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
	1	Visual Examination	By Visual Examination check without and out pressure & testing.	There shall be no defects that affect the serviceability of the product.
	2	Contact Resistance	@2-4VDC 100mA. For silver plated contacts.	10mΩ Max
	3	Insulation Resistance	Measurements shall be made following application of 1000 V/ DC 100mA potential across terminals and cover for 1 minute.	1000MΩ min/1000V
	4	Dielectric Withstanding Voltage	1000 VAC(50Hz or 60Hz) 0.5mA shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.

MECHANICAL PERFORMANCE	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
	5	Solder Heat Resistance	①Manual Soldering : Soldering Temperature : Max. 350°C Continuous Soldering Time : Max. 5 seconds. ②WAVE Soldering : Soldering Temperature: 260±5°C. Duration of Solder Immersion: 5 ±1 seconds Temperature Profile  ③Frequency of Soldering Process 2 times max. (PCB is 1.6mm in thickness) ■ Precautions in Handling Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.	①Shall be free from pronounced backlash and falling-off or breakage terminals. ②As shown in item 2~4.
	6	Vibration	Shall be vibrated in accordance with Method 201A of MIL-STD-202F ①Frequency: 10~55-10Hz in 1-min/cycle. ②Direction: 3 vertical directions including the directions of operation ③Test time: 2 hours each direction.	As shown in item 2~4

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
MECHANICAL PERFORMANCE	7	Shock	Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F ①Acceleration; 50g ②Action time: 11±1m seconds. ③Testing Direction: 6 sides. ④Test Cycle: 3 times in each direction.	As shown in item 2~4
	8	Actuation Force	MODEL-1305N MECHANICAL TEST 500gram 、1000gram 、 2000gram.	At for test the force. Force: 650±100grams.
OPERATING LIFE	9	Operating Life	Measurements shall be made following the test forth below: ①5A@120VAC resistive load—silver plated. 2A@250VAC resistive load—silver plated. ②Rate of Operation: 6-8 operation cycles per minute. ③Electronics Life Test: 6,000 cycles.	① Dielectric Strength : 1000V. ② Insulation Resistance: 1000MΩ min.
			Mechanical Life Test: 40,000 cycles.	Contact Resistance: 10mΩ Max.
HUMIDITY RESISTANCE	10	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: ①Temperature:-40±3℃ ②Time:96 hours.	As shown in item 2~4.

HUMIDITY RESISTANCE	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
	11	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature: $85 \pm 2^{\circ}\text{C}$ ②Time: 96 hours.	As shown in item 2~4.
	12	Resistance Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature: $40 \pm 2^{\circ}\text{C}$ ②Relative Humidity: 90~95% ③Time: 96 hours.	①Contact Resistance: 10 mΩ Max. ②Insulation Resistance: 1000MΩ min.
	13	The Salt Testing	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature: $35 \pm 2^{\circ}\text{C}$ ②The ratio of salt-water : 5% ③The spray amount of salt- water : 1~2 ml/h. ④ Time: 48 hours.	The testing standard based on bubble, crack, And magnifying glass with gauge.



REV.	DESCRIPTION	ENG.	APPROVE
更改	說明	修改人	審核

Model No.	POS.1	POS.2	POS.3
SP4	(ON)	OFF	(ON)
Term. Comm.	2-3	OPEN	2-1
SCHEMATIC			

SWITCH FUNCTION

PANEL MOUNTING

SOLDER LUG

SPECIFICATIONS:

- 1.RATING: 5Amps @ 120VAC or 28VDC
2Amps @ 250VAC
- 2.CONTACT RESISTANCE: 10m-ohms max. initial @ 2-4VDC
100mA for silver plated contacts
- 3.INSULATION RESISTANCE: 1,000M-ohms min.
- 4.DIELECTRIC STRENGTH: 1,000Vrms min @ sea level
- 5.MECHANICAL LIFE: 40,000 make and break cycles.
- 6.OPERATING TEMPERATURE: -40°C to +85°C

MATERIALS:

- 1.CASE: Dially phthalate(DAP)(UL94v-0)
- 2.ACTUATOR: Brass, Tin-Cobalt alloy over Ni plated
- 3.BUSHING: Brass, nickel plated
- 4.HOUSING: Stainless Steel
- 5.TERMINAL/CONTACT: Copper, silver plated

ITEM NO.	100-SP4-T100B1M1Q0
料號	1MS4T1B1M1Q0

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		TAIWAY ELECTRONICS COMPONENTS CO.,LTD.				
		USED 用途		APPD. 審核		
		100		Amy 2024/08/14		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGULAR TOLERANCE: ±1.0°		FINISH 處理		CHKD. 校對		
				Amy 2024/08/14		
TOLERANCE		SCALE 比例		DR. 製圖		
0.00mm±0.25mm 0.0mm ±0.4mm		/		Sho 2024/08/14		
		UNIT 單位		inch mm		
MATERIAL		TITLE 名稱				
		Toggle Switch				
		DWG NO. 圖號			SIZE 圖紙	
		100-SP4-T100B1M1Q0			A4	
FILE NAME 檔案名稱		1MS4T1B1M1Q0.dwg		SHEET 張		
		1 / 1		REV. 更改		
				2		