

PUSH SWITCHES



JSP-2212F



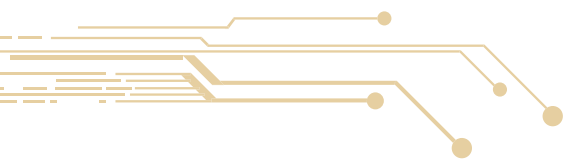
JSP-2213A



JSP-2216



JSP-2216F



PUSH SWITCHES

COMMON SPECIFICATIONS

1. Switch rating : DC 30V, 0.1mA
2. Operation temperature range : -20℃ ~ 85℃
3. Contact arrangement : ☐ Poles ☐ Throws
4. Standard conditions

Ambient temperature : 5 ~ 35℃

Relative humidity : 45 ~ 85%RH

However, if doubt arises on the decision based on the measured values under the above-mentioned conditions, the following conditions shall be employed.

Ambient temperature : 20±2℃

Relative humidity : 65±5%RH

5. Electrical characteristics

ITEMS	TEST CONDITIONS	PERFORMANCE
Contact Resistance	Push force : Operation force Measurements shall be made with a 1kHz small current contact resistance.	As per individual specifications
Insulation Resistance	D.C. 500V for 1 minute. (Between terminals)	100MΩ Min.
Dielectric Withstanding Voltage	A.C. 500V for 1 minute. (Between terminals)	There shall be no breakdown

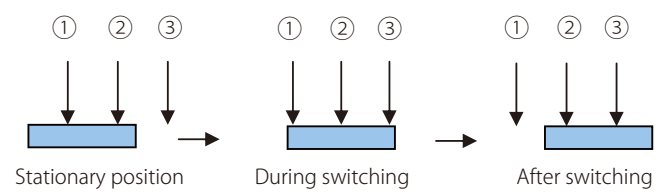
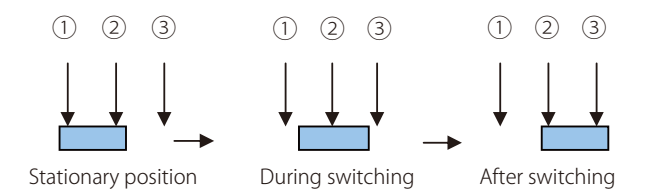
6. Mechanical characteristics

ITEMS	TEST CONDITIONS	PERFORMANCE
Operation Force	A static load shall be applied to the tip of actuator in operating direction.	As per individual Specifications
Travel	Appling a static load twice the actuating force to the center of the stem, the travel distance for the stem to come to a stop shall be measured.	
Stem Strength	The maximum force to withstand a pull applied opposite to the direction of stem operation shall be measured.	
Stop Strength	A static load of 3kgf shall be applied in the direction of stem operation for a period of 15 seconds.	No damage(Electrical and Mechanical)
Vibration Test	(1) Amplitude : 1.5mm (2) Sweep rate : 10-55-10Hz for 1 minute. (3) Sweep method : Logarithmic frequency sweep rate. (4) Vibration direction : X.Y.Z (3 directions). (5) Time : Each direction 2 hours (Total 6 hours).	

7. Climatic characteristics

ITEMS	TEST CONDITIONS	PERFORMANCE
Cold test	(1) Temperature : -20±2℃ (2) Duration of test : 96 hours (3) Take off a drop water (4) Standard conditions after test : 1 hour	No damage(Electrical and Mechanical)
Heat test	(1) Temperature : 85±2℃ (2) Duration of test : 96 hours (3) Standard conditions after test : 1 hour	
Humidity Test	(1) Temperature : 40±2℃ (2) Relative humidity : 90 ~ 95% (3) Duration of test : 96 hours (4) Take off a drop water (5) Standard conditions after test : 1 hour	
Operating Life Test	(1) DC 5V, 5mA Resistance load (2) Operation speed : 2 ~ 3 cycles/sec (3) Push force : Maximum value of operation force (4) Cycles of operation : See outside drawing page	Contact Resistance : As per individual Specifications Operating force : initial value ±30%

8. Explanation of Timing

Shorting	Non - shorting
Switching action is accomplished after electrical connections have been made once across terminals during circuit selection. (Terminal ①,② and ③ electrically connected once) 	Electrical connections are turned off once across terminals during circuit selection. (Terminal ①,② and ③ are electrically turned off once) 

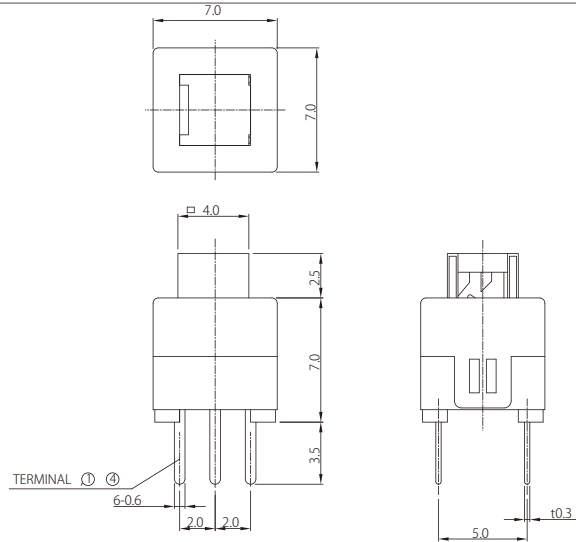
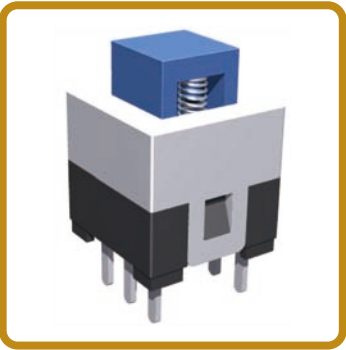
9. Operating Mode

Interlock(lock release)	When a key is depressed, the other key having previously been locked is released and the depressed key is locked.
Self-lock(latching)	Operating independently from other keys, A key is locked when it is depressed, and released when depressed again.
Non-lock(momentary)	A key is held depressed while it is being pressed down, and released when the pressing force is eliminated.
Rreset	Operating for releasing the key locked in the interlock mode. A key previously locked is released when this reset key is depressed, and locked again when the key is released. This mode is available only in the switch with 0 or 2 poles.

PUSH SWITCHES

PUSH SWITCHES

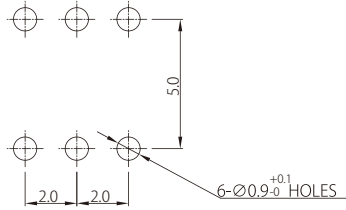
JSP-2212F



SPECIFICATION

1. RATING : DC30V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 30mΩ MAX.
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING MODE : SELF-LOCK
NON-LOCK
6. STORKE : FULL 1.80mm
LOCK 1.00mm
7. OPERATING FORCE : 100±50gf, 200±80gf
8. LIFE : 10,000 CYCLES

P.C.B MOUNTING HOLES

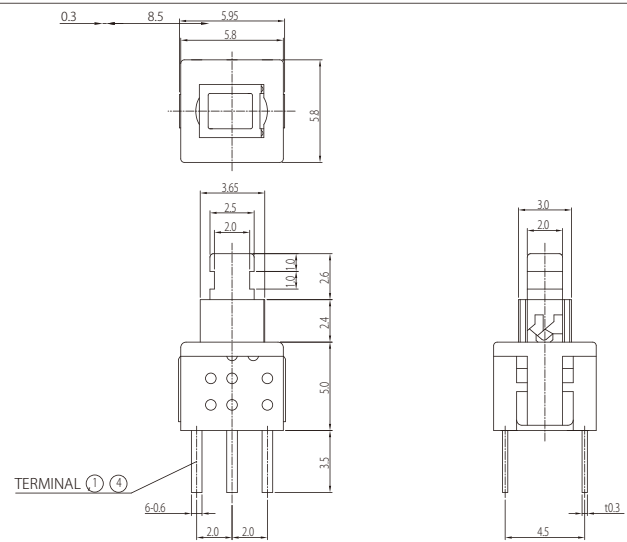
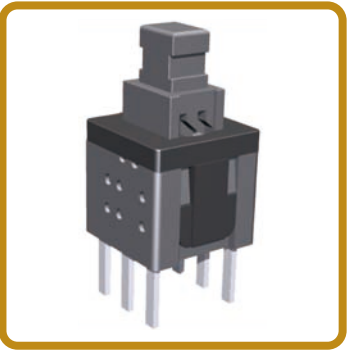


PACKING

BULK TYPE

1,000/1BAG(EA)

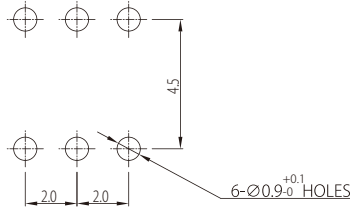
JSP-2216



SPECIFICATION

1. RATING : DC30V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 100mΩ MAX.
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING MODE : SELF-LOCK
NON-LOCK
6. STORKE : FULL 1.9mm
LOCK 1.0mm
7. OPERATING FORCE : 180gf±80gf, 250gf±80gf
8. LIFE : 10,000 CYCLES

P.C.B MOUNTING HOLES

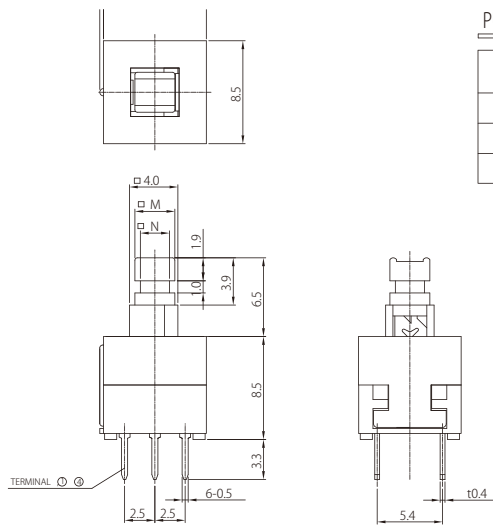
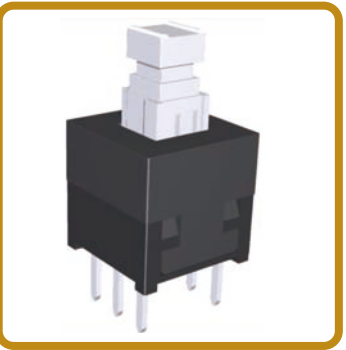


PACKING

BULK TYPE

2,000/1BAG(EA)

JSP-2213A



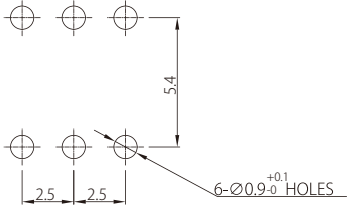
PUSH SIZE

MODEL	N(mm)	M(mm)
JSP-2213A	2.4	3.3
JSP-2213B	2.0	2.8
JSP-2213C	2.4	3.0

SPECIFICATION

1. RATING : DC30V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 30mΩ MAX.
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING MODE : SELF-LOCK
NON-LOCK
NON-LOCK WITH CLICK
6. STORKE : FULL 2.5mm
LOCK 1.5mm
7. OPERATING FORCE : 200±80gf, 300±100gf
8. LIFE : 10,000 CYCLES

P.C.B MOUNTING HOLES

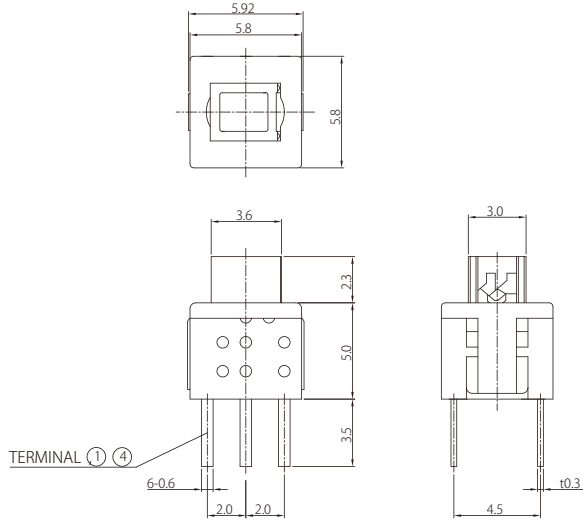
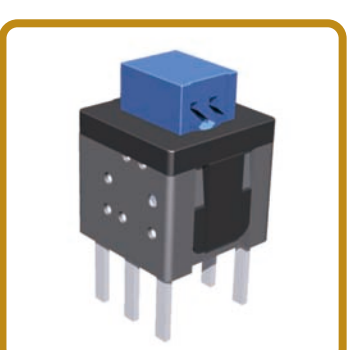


PACKING

BULK TYPE

500/1BAG(EA)

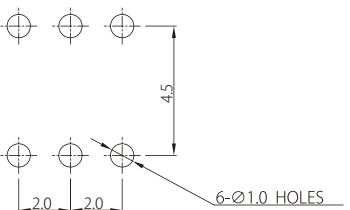
JSP-2216F



SPECIFICATION

1. RATING : DC30V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 100mΩ MAX.
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING MODE : SELF-LOCK
NON-LOCK
6. STORKE : FULL 1.9mm
LOCK 1.0mm
7. OPERATING FORCE : 180gf±80gf, 250gf±80gf
8. LIFE : 10,000 CYCLES

P.C.B MOUNTING HOLES



PACKING

BULK TYPE

2,000/1BAG(EA)

TACT

SLIDE

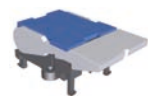
PUSH

HOOK

HOOK SWITCHES



HOOK SWITCHES



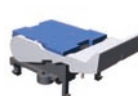
JSH-2240



JSH-2240A



JSH-2240B



JSH-2240C

COMMON SPECIFICATIONS

- 1. Switch rating : DC 48V, 0.2A
- 2. Operation temperature range : -20℃ ~ 85℃
- 3. Preservative temperature range : □ Poles □ Throws
- 4. Standard conditions
 - Ambient temperature : 5 ~ 35℃
 - Relative humidity : 45 ~ 85%RH
 - However, if doubt arises on the decision based on the measured values under the above-mentioned conditions, the following conditions shall be employed.
 - Ambient temperature : 20±2℃
 - Relative humidity : 65±5%RH

5. Electrical characteristics

ITEMS	TEST CONDITIONS	PERFORMANCE
Contact Resistance	Push force : Operation force Measurements shall be made with a 1kHz small current contact resistance.	As per individual specifications
Insulation Resistance	D.C. 500V for 1 minute. (Between terminals)	100MΩ Min.
Dielectric Withstanding Voltage	A.C. 500V for 1 minute. (Between terminals)	There shall be no breakdown

6. Mechanical characteristics

ITEMS	TEST CONDITIONS	PERFORMANCE
Operation Force	Gradually increasing the load applied to the center of the stem, the maximum load required for the stem to come to a stop shall be measured.	As per individual specifications
Travel	Applying a static load twice the actuating force to the center of the stem, the travel distance for the stem to come to a stop shall be measured.	
Stem Strength	The maximum force to withstand a pull applied opposite to the direction of stem operation shall be measured.	
Stop Strength	A static load of 1kgf shall be applied in the direction of stem operation for a period of 15 seconds.	No damage(Electrical and Mechanical)
Vibration Test	(1) Amplitude : 1.5mm (2) Sweep rate : 10-55-10Hz for 1 minute. (3) Sweep method : Logarithmic frequency sweep rate. (4) Vibration direction : X.Y.Z (3 directions). (5) Time : Each direction 2 hours (Total 6 hours).	

7. Climatic characteristics

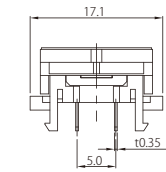
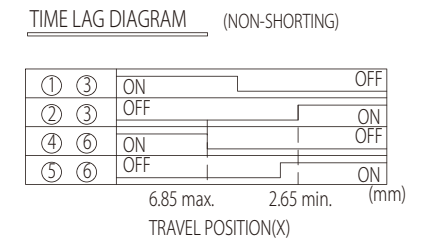
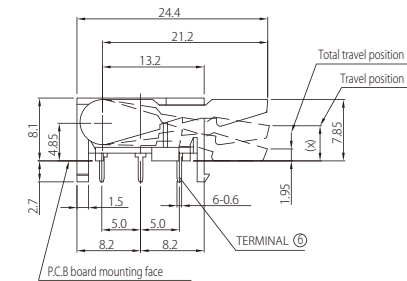
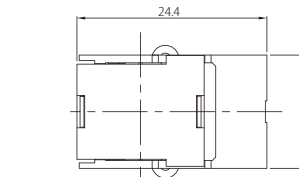
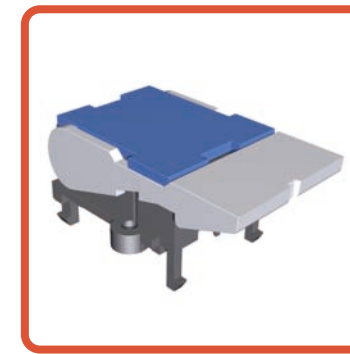
ITEMS	TEST CONDITIONS	PERFORMANCE
Cold test	(1) Temperature : $-20\pm 2^{\circ}\text{C}$ (2) Duration of test : 96 hours (3) Take off a drop water (4) Standard conditions after test : 1 hour	No damage(Electrical and Mechanical)
Heat test	(1) Temperature : $85\pm 2^{\circ}\text{C}$ (2) Duration of test : 96 hours (3) Standard conditions after test : 1 hour	
Humidity Test	(1) Temperature : $40\pm 2^{\circ}\text{C}$ (2) Relative humidity : 90 ~ 95% (3) Duration of test : 96 hours (4) Take off a drop water (5) Standard conditions after test : 1 hour	
Operating Life Test	(1) DC 5V, 5mA Resistance load (2) Operation speed : 15 ~ 20 cycles/minute (3) Push force : Maximum value of operation force (4) Cycles of operation : See outside drawing page	Contact Resistance : As per individual Specifications Operating force : initial value $\pm 30\%$

Product Code Explanation

2	2	4	0	B
● Serial Number				
● No.of Position				
No.of Position		1	2	
Code		1	2	
● No.of Position				
No.of Position		1	2	
Code		1	2	

HOOK SWITCHES

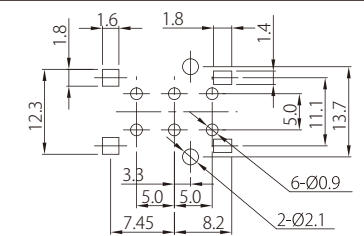
JSH-2240



SPECIFICATION

1. RATING : DC48V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : $50\text{m}\Omega\text{Max}$
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING FORCE : 70gf Max
6. TIMING : SHORTING or NON-SHORTING

P.C.B MOUNTING HOLES

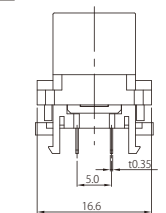
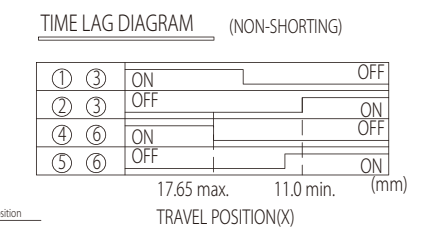
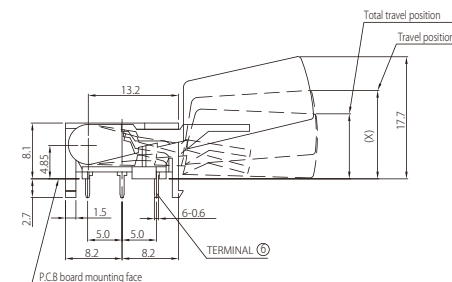
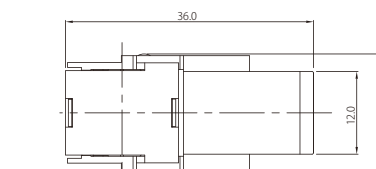
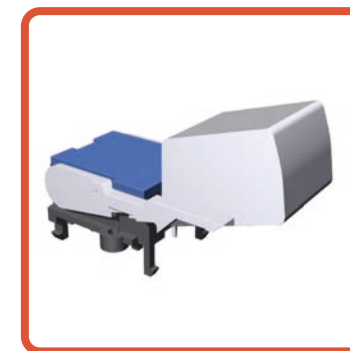


PACKING

BULK TYPE

117/1TRAY(EA)

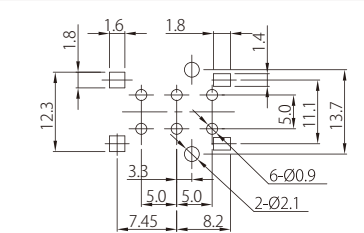
JSH-2240A



SPECIFICATION

1. RATING : DC48V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : $50\text{m}\Omega\text{Max}$
4. TIMING : SHORTING or NON-SHORTING
5. OPERATING FORCE : 70gf Max
6. LIFE : 300,000 CYCLES

P.C.B MOUNTING HOLES



PACKING

BULK TYPE

500/1BAG(EA)

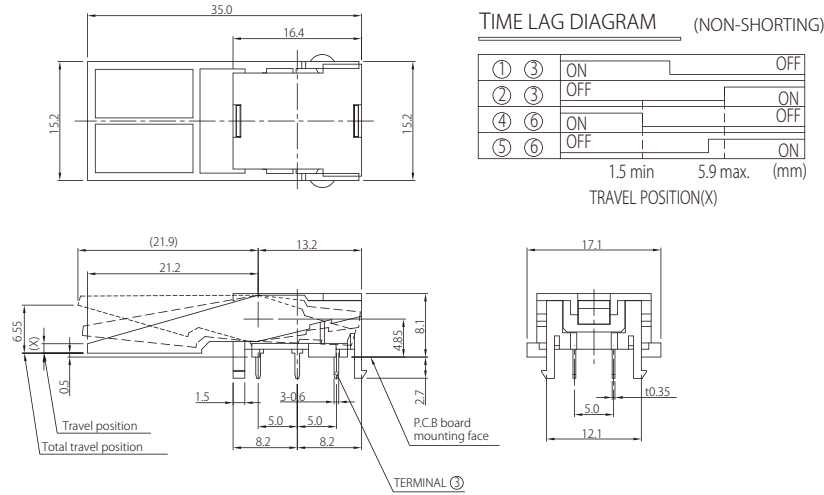
TACT

SLIDE

PUSH

HOOK

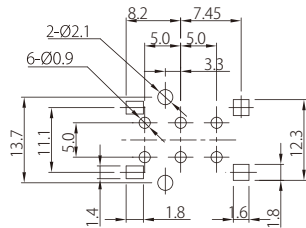
JSH-2240B



SPECIFICATION

1. RATING : DC48V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 50mΩ Max
4. OPERATING FORCE : 70gf Max
5. TIMING : SHORTING or NON-SHORTING

P.C.B MOUNTING HOLES

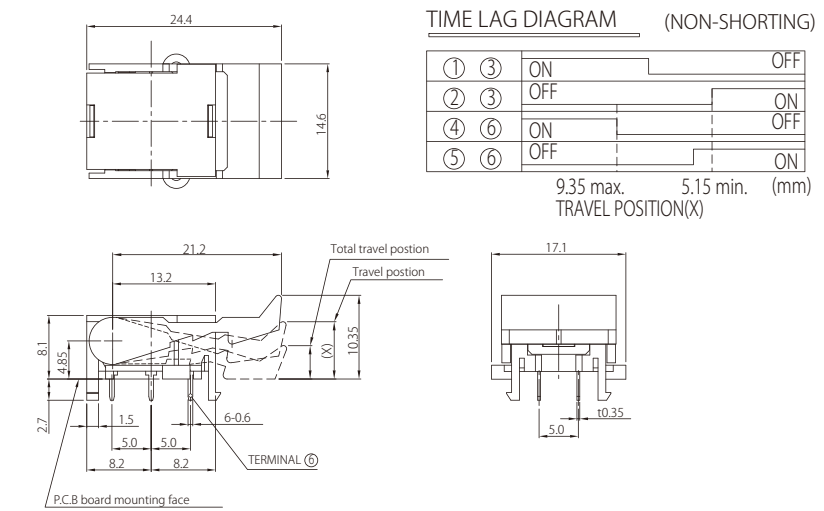


PACKING

BULK TYPE

200/1BAG(EA)

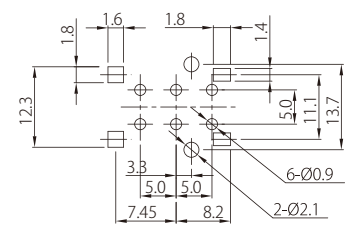
JSH-2240C



SPECIFICATION

1. RATING : DC48V 0.1A
2. CIRCUIT : 2C-2P
3. CONTACT RESISTANCE : 50mΩ Max
4. OPERATING FORCE : 70gf Max
5. TIMING : SHORTING or NON-SHORTING

P.C.B MOUNTING HOLES



PACKING

BULK TYPE

500/1BAG(EA)