TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		3/11

1、 GENERAL

1.1 APPLICATION

This specification is applied to the requirements for SELF LOCK switch (mechanical contact)

1.2 Operating Temperature Range

-30℃～80℃(Normal humidity, normal air pressure)

1.3 Storage Temperature Range

-30℃～85℃(Normal humidity, normal air pressure)

1.4 Test Conditions

Unless otherwise specified, tests and measurement shall be made in the following standard conditions:

Normal temperature……5℃～35℃

Normal humidity……relative humidity 25%～85%

Normal air pressure……86Kpa～106Kpa

If any doubt arise from the judgment, tests shall be conducted at the following conditions:

Temperature……20℃±2℃

Relative humidity…….....…65%±5%

Air pressure……86Kpa～106Kpa

1.5 Storage method

1. Ensure that the product without package breaking or wetting before use.

2.Storage conditions:

Storage temperature：-5～35℃;

Storage humidity：25% ~80%;

Unopened status: Use up the product as soon as possible before 6 months. (calculated from shipment date).Over 6 months, please make sure below ;

before use it: terminal without oxidation or blackening, plastic parts without moisture absorption or bubble, ensure solderability.

Opened status: use up within 1 month;

Storage precautions: Please avoid the following environment: with high humidity, high temperature , corrosive gases and direct sunlight.

3. **Do not stack too many switches.**

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		4/11

2、Detailed specification

2.1 Appearance: There should be no defects that affect the serviceability of product.

2.2 Style and dimension: shall conform to the assemble drawings.

2.3 Type of actuating: Tactile feedback.

2.4 Contact arrangement: 2 pole, 2 throw
(Details of contact arrangement are given in the assembly drawings.)

2.5 Ratings: DC 30V 0.1A

3. ELECTRICAL SPECIFICATION

ITEM		TEST CONDITIONS	REQUIREMENTS
3.1	Contact Resistance	Applying a static load of 1.5 times operating force to the center of the stem, measurements shall be made by 5V DC 10mA or more than 1KHz AC small-current contact resistance meter.	≤100mΩ
3.2	Insulation Resistance	Apply a voltage of 100V DC shall be applied for 1 min. After which measurement be made: **(1)** Between conductors not to be contact **(2)** Between individual terminals and frame	≥100MΩ
3.3	Dielectric voltage proof	AC 250V rms（50-60Hz）For 1 MIN，trip current:0.5mA （1）Between conductors not to be contact （2）**Between individual terminals and frame**	There should be no breakdown and flashover

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		5/11

4．机械性能：

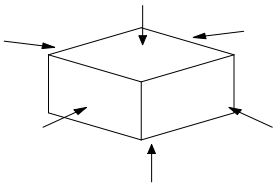
MECHANICAL SPECIFICATION

ITEM		TEST CONDITIONS	REQUIREMENTS
4.1	Operating Force	Placing the switch such that the direction of switch operation is vertical and then gradually increasing the load applied to the center of the stem, the maximum load required for the switch to come to a stop shall be measured.	200±70 gf
4.2	Full Travel	Placing the switch such that the direction of switch operation is vertical and then applying static load of 2times operating force to the center of the stem; the travel distance for the switch to come to a stop shall be measured.	2.2±0.2mm
4.3	LOCK Travel	Placing the switch such that the direction of switch operation is vertical and then applying static load of 2times operating force to the center of the stem; the travel distance for the switch to come to a stop shall be measured.	1.2±0.2mm
4.4	Operating strength	Apply following load on the tip of of operating part 15 s. ☐ Operation direction ... 80N part ☐ Drawing direction ... 20N ☐ Right direction against operating direction ... 10N	The lever shall have no serious deformation and function is normally.

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		6/11

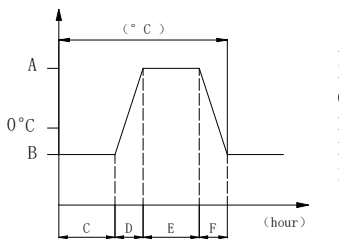
ITEM		TEST CONDITIONS	REQUIREMENTS
4.5	Terminal Strength	A static load of 500gf shall be applied to the Terminal for 15 Sec. in any direction.	Electrical characteristics shall be satisfied without damage or excessive looseness of terminals
4.6	Locking Strength	Apply force 5N to drawing direction for 10s at locking condition of switch.（This standard applies to switch lock mechanism.）	No abnormalities shall occur in appearance and function.
4.7	Vibration	Measurement shall be made following the test set forth below: （1） Vibration frequency range: 10 to 55 to 10Hz （2） Amplitude: 1.5mm (3) Direction of vibration:Three mutually perpendicular direction including the direction of stem travel (4) Duration: Each 2 hours.	Item 3 Item4.1 Item4.2 Item4.3
4.8	Shock	Test by following conditions (1)installation method: normal (2)Acceleration: 784m/s² (3)Acting time: 11ms (4)Test direction: 6 directions Times: 3 times/direction ,total 18 times 	Item3 Item4.1 Item4.2 Item4.3

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		7/11

5、ENVIRONMENTAL SPECIFICATION

ITEM		TEST CONDITIONS	REQUIREMENTS
5.1	Resistance to low temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: (1) Temperature : -30±2℃ (2) Time: 96h	Item3 Item4.1 Item4.2 Item4.3
5.2	Heat resistance	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: (1) temperature:80±2℃ (2) time: 96h	Item3 Item4.1 Item4.2 Item4.3
5.3	Change of temperature	After 5 cycles of following conditions, the sample shall be allowed to stand under normal temperature and humidity conditions for 1 h. and measurements shall be made. During the test water drops shall be removed.  A：+80±2℃ B：-30±2℃ C：2 D：1 E：2 F：1	Item3 Item4.1 Item4.2 Item4.3
5.4	Moisture resistance	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: (1) temperature: 60±2℃ (2) relative humidity:90% to 95% (3) time: 96h	Contact resistance≤200mΩ Insulation Resistance≥10MΩ Item3.3 Item4.1 Item4.2 Item4.3

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		8/11

ITEM		TEST CONDITIONS	REQUIREMENTS
5.5	Salt Mist	The switch shall be checked after following test: (1) temperature: 35℃±2℃ (2) **salt solution : 5±1%(solids by mass)** （3）Time: 8±1h After test, salt deposit shall be removed by running water.	No remarkable corrosion shall be recognized in metal part.
5.6	Operation life	Measurement shall be made following the test set forth below: （1）**DC 5V, 5mA resistive load** (2) **Rate of operation: 10~15 times/min** (3) Operating Force：1.5 times as much as Operating Force (4) fault-free life:5,000cycles	Contact resistance≤2Ω Insulation Resistance≥10MΩ Item3.3 Item4.1 Item4.2 Item4.3
5.7	Solderability	Measurements shall be made following the test set forth below: (1) Solder temperature : 245±5℃ (2) Immersion time: 5s±0.5s	Except for the edge, the coating should cover a minimum 90%
5.8	Resistance to soldering heat test	Measurements shall be made following the test set forth below: (1) Solder temperature : 260±5℃ (2)Immersion time: 3s±1s	Without deformation of case or excessive looseness of terminal selectrical characteristics shall be satisfied

TACTRONIC

APPROVAL SPECIFICATIONS

6. SOLDERING CONDITIONS:

ITEM		Recommended conditions	
6.1	Hand soldering	(1) Please practice according to below conditions: (1) Soldering temperature: ≤350℃ (2) Continuous soldering time: ≤3 s	
6.2	Conditions for Auto-dip	Flux built-up	Mounting surface should not be coated with flux
		Preheating temperature	Ambient temperature of the soldered surface of PC board. 100℃ max.
		Preheating time	60s max.
		Soldering temperature	260℃ max.
		Continuous dipping time	5s max.
		Number of soldering	2 times max.

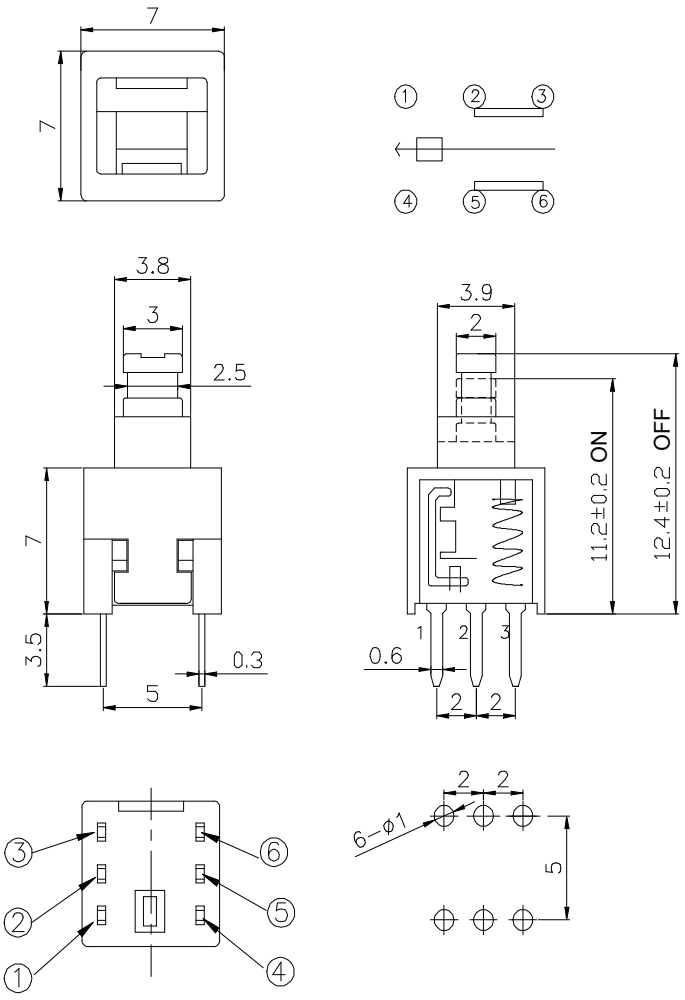
(Notes):

a. Prevent flux penetration from the top of the switch
b. **After switches were soldered,please be careful not to clean switches with solvent or other similar products.**
c. **Right after switches were soldered;please be careful not to load to on the knobs of switches.**
d. **Please be cautions not to give excessive static load or shock to switches.**
e. **Please be careful not to pile up P.W.B.after switches were soldered**

TACTRONIC

APPROVAL SPECIFICATIONS

Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		10/11



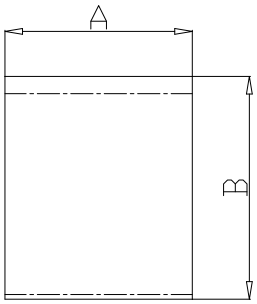
General tolerance：±0.2mm

NO.	NAME	MATERITAL	QTY.	PLATING
1	STEM	PA66	1	Blue
2	COVER	PA66	1	White
3	SPRING	CARBON WIRE	1	
4	TERMINAL	BRASS	6	Ag plating
5	BASE	PA66	1	Black
6	CROCHET	SUS	1	
7	CONTACT	SILVER COPPER	2	Ag plating

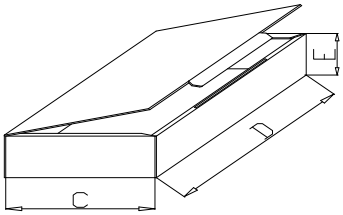
TACTRONIC

APPROVAL SPECIFICATIONS

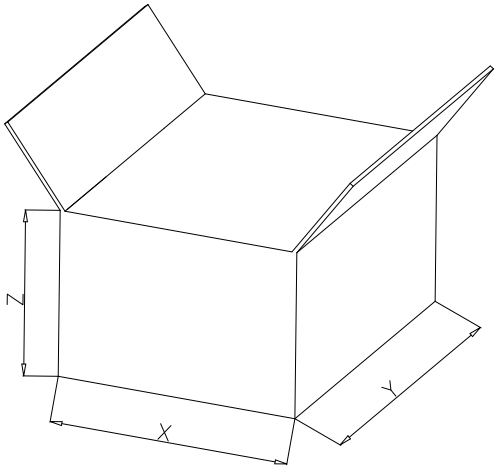
Product name	P/N	Version	Document No.	Page
Self Lock switch	PB22E07431-06	A/01		11/11



A=190mm、B=195mm



C=216mm、D=165mm、E=48mm



X=350mm、Y=455mm、Z=280mm