

# Membrane Switch Keyboard

----Prepared by JASPER

## 1. Definition:

Membrane Switch Keyboard is a switching & conductive keyboard control panel, which integrate:

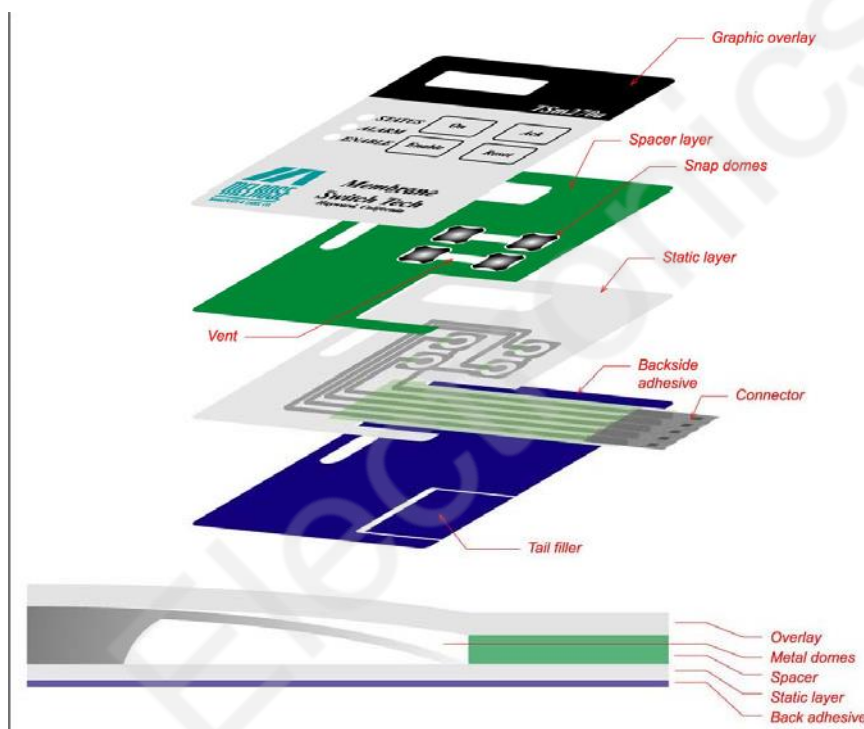
- a. the function of switch and input devices;
- b. front panel with graphic overlay/LCD windows/LED instruction;

It mainly includes five layers:

- a. Graphic overlay;
- b. Top circuit or dome switch;
- c. Spacer layer;
- d. Static layer and back adhesive/rigid base.

## 2. Basic Structure:

Here is a general membrane switch keyboard structure drawing:



Because it owns below advantages:

- High reliability
- Long life
- Low cost
- Dust proof
- Water proof
- Rust proof
- Easy installation
- Design flexibility

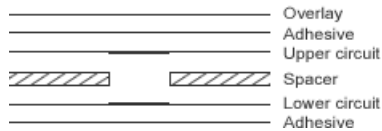
### 3. Product type:

#### 1) Front panel/name plate/label:

#### 2) Flat type:

Flat type membrane keyboard owns flat keys and has no tactile feeling. We can produce different custom design flat type keyboard in colourful graphic, different circuit and functions.

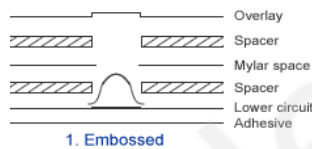
##### Flat Type



#### 3) Tactile type:

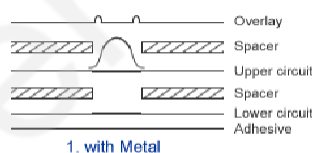
#### Embossed key type:

##### Metal Dome Type



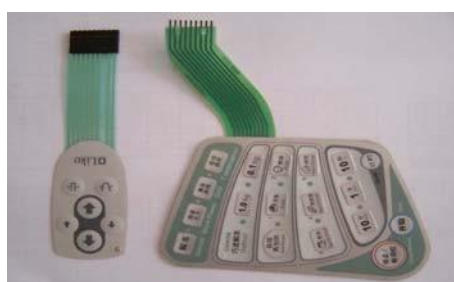
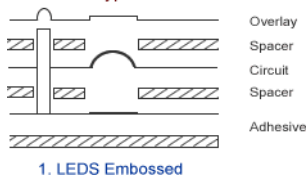
#### Emboss Frame Type:

##### Emboss Frame Type



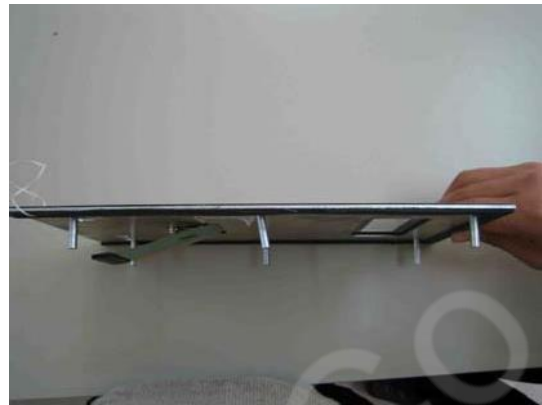
#### 4) Assembled with LED type:

##### SMD LED Type



5). Assembled with metal Sheet base type:

Normal keyboard + metal sheet base (Zinc plated steel sheet or aluminium sheet)



6). Keyboard with rubber key or rubber overlay:

This type is some special, its keys or whole overlay is made by silicon rubber instead of poly film. It merged the merits of membrane switch keyboard and silicon rubber keypad. It is more convenient than silicon rubber keypad, and more tactile than common membrane switch keyboard.



6) EL back lighting

EL backing lighting is using Electroluminescent ink for conducting, insulating lighting. This kind of parts was used for printed lamps.

The main EL characteristics are:

- Uniform surface illumination of complex shapes
- Thin, flexible and light weight
- Low power consumption
- Very low heat generation
- Vibration and impact resistant



Application:

It was widely applied in these filed as control panel:

- Home appliances
- Medical Equipment
- Industrial Process Controllers
- Computer Peripherals
- Military Applications

a. Home appliances:





b. Medical Equipment:





#### d. Computer Peripherals

##### Point-of-sale (POS) applications

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#### e. Military Applications

