

What is Membrane Switch?

The membrane switch is a momentary switching device that is manufactured by using a series of flexible layers of polymer films and adhesives. The top layer, called a graphic overlay, is manufactured by printing on the down surface of transparent polyester or polycarbonate film. Membrane switches can be constructed of multiple circuit layers, and more optimized graphic design features, such as domed key embossing. Designs that are more complex require more material layers for proper construction and reliable operation. Membrane switches, when combined with components such as a tactile dome, graphic overlay, or integrated LEDs or resistors can provide the designer with virtually limitless capabilities to create the ideal custom user interface for their products.

Basic Properties .

Electrical Properties:	
Rated Voltage	≤50V DC
Rated Current	≤ 100mA
Operating Power	≤1W
Insulation Resistance	≥100MΩ (250V DC)
Loop Resistance	10Ω~2kΩ (based on the design)
Contact Resistance	0.5 ~ 5Ω
Wire Lead Resistance	<1Ω/cm
Base Material Voltage Withstand	1500V DC
Mechanical Properties:	
Life Expectancy	Flat type ≥ 5 million times, Tactile type ≥ 1 million times
Operation Force	Flat Type 57-284g ,Tactile Type 170-397g
Dome Rebound Time	≤6ms
Tail Bending Performance	≤180°
Switch Stroke	Flat 0.1~0.5mm , Tactile 0.6~1.5mm
Vibration	20G's max.
Thickness	0.7~1.5 mm
Environmental Properties:	
Operation Temperature	-40°C to +80°C (-40°to 176°F)