



MEMBRANE SWITCHES— CUSTOMIZED TO YOUR NEEDS

Top-quality switches mean superior performance for your product. When you use a customized membrane switch from Wilson-Hurd, you will receive the best in quality and performance. Our highly skilled engineering team will carefully review your requirements to design the optimal switch that will be unique to your application.

With a completely sealed design, our membrane switches are the perfect solution for any harsh application. From medical settings to oil fields to car washes, our membrane switches are able to survive even the toughest environmental conditions. We offer flex membrane switches, as well as complex membrane switch assemblies that incorporate value-added components, such as displays, back panels and printed circuit boards.

ADVANTAGES OF MEMBRANE SWITCHES:

- Reliable performance
- Low cost
- Minimal risk of failure due to breakage of moving parts
- Excellent operating life
- Wide design flexibility—can be tailored to a variety of applications

When you need optimum performance, select a custom membrane switch from Wilson-Hurd.

DESIGN OPTIONS AVAILABLE

- Tactile or non-tactile response
- Emboss (pad, rim)
- Deboss
- Selective texture
- Windows or lenses—acrylic, polyester or polycarbonate
- ESD, RFI & EMI shielding
- LEDs, EL or fiber-optic backlighting

Options available exclusively with our Membrane Switch Assemblies:

- Printed circuit boards
- Metal or plastic back panels
- Bezels
- Displays (VFD, LED, LCD)

MEMBRANE SWITCH TECHNICAL DATA

MECHANICAL SPECIFICATIONS	
TYPE	SPECIFICATION
Actuation Force	4 – 16 oz
Switch Travel	.007" to .035"
Overall Thickness	Varies by materials used in design
Size Tolerance	Typically .010"
Tooling	Steel rule dies & Class A tools, as well as laser-cutting for prototypes
Number of Actuations	Up to 3 million actuations, depending on design
ENVIRONMENTAL SPECIFICATIONS	
TYPE	SPECIFICATION
Humidity	0 to 98%, no condensation
Operating Temperature	-28.9°C (-20°F) to 70°C (+158.0°F)
Storage Temperature	-40°C (-40°F) to 70°C (+158.0°F)
Salt Fog	5% salt solution, 48 hours
ELECTRICAL SPECIFICATIONS	
TYPE	SPECIFICATION
Contact Material	Silver, carbon, gold or nickel
Voltage	30 volts DC
Rated Current/Voltage	20ma@30 volts DC resistive load
Contact Bounce	Less than 20 milliseconds
Maximum Switch Power	1 watt
Contact Resistance	Less than 100 ohms (closed loop)
Dielectric Strength	5000V max on polyester material ≥ than .0005"
Termination	Customer choice
Breakdown Voltage to Ground	1000 volts DC
Open Circuit Resistance	10 ⁶ ohms
Capacitance	20 picofarrads
Design Configuration	XY matrix, common buss or custom

