

BASIC MEMBRANE SWITCH CONSTRUCTION

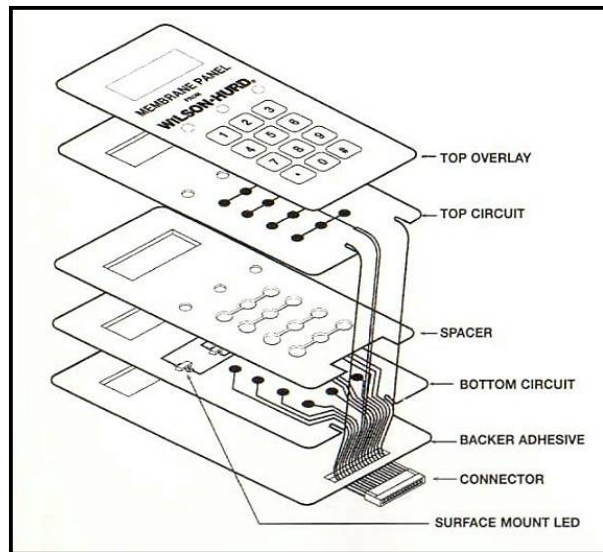
All of our membrane switches are custom designed and manufactured to meet customer specifications. During the design process, our engineers consider many variables including:

- Operating environment
- Face plate material
- Tail type and configuration
- Circuit layout
- Static (RFI, EMI) shielding
- Display lens for read-out
- LED type and placement
- Tactile dome type and force
- Back-lighting requirements

All of our switches are constructed under strict quality guidelines, and tested prior to shipment.

Mechanical Specifications:

- Actuation Force
 - 4 – 16 oz.
- Switch Travel
 - .007" to .035"
- Number of Actuations
 - Up to 3 million actuations, depending on design
- Overall Thickness
 - Varies by material (typically .055")
- Size Tolerance
 - $\pm .010$ "
- Tooling
 - Steel rule die and Class A tools
- Windows
 - Acrylic, polyester, polycarbonate
- Window Filter
 - Plasma, LCD, LED, and printed deadfront
- Shielding
 - ESD, RFI, EMI



*Basic Membrane Switch Construction
-Exploded view*

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- Embossing
 - Pad, rim

- Back-lighting
 - LED, EL, Fiber-optic

Electrical Specifications:

- Contact material
 - Silver, carbon, gold or nickel
- Voltage
 - 30 volts DC
- Rated current/voltage
 - 20 ma @ 30 volts DC resistive load
- Contact bounce:
 - Less than 20 milliseconds
- Maximum Switch Power
 - 1watt
- Contact Resistance
 - Less than 100 ohms (closed loop)
- Dielectric Strength
 - 5000V max on polyester material \geq .0005"
- Termination
 - Customer choice (Berg or Nicomatic connector typical)
- Breakdown Voltage to Ground
 - 1000 volts DC
- Open Circuit Resistance

- 10^6 ohms

- Capacitance
 - 20 picofarrads

Environmental Specifications:

- Humidity
 - 0 to 98%, no condensation
- Temperature
 - Operating: -28.9°C (-20°F) to 66°C (150°F)
 - Storage: -40°C (-20°F) to 66°C (150°F)
- Salt fog
 - 5% salt solution, 48 hours
- Design configuration
 - XY matrix, common buss, or custom.

To learn more, email us at sales@wilsonhurd.com.