

Membrane Switch Design Guide

This guide summarises the decisions that matter most when specifying a custom membrane switch.

Layer Stack

- Graphic overlay: polyester (PET) 0.125-0.25 mm, matte or gloss, hard-coated windows
- Spacer with adhesive, top and bottom circuits printed with silver ink
- Rear adhesive (3M 467/468) or rigid backer in aluminum / FR4

Tactile Options

- Metal domes: crisp feedback, 150-600 gf, > 1 million cycles
- Polydomes: quiet, embossed look, lower cost

Design Rules

- Keep keys at least 3 mm from the overlay edge
- Define tail exit and connector before enclosure design
- Use dead-front printing for hidden LEDs
- Add an ESD shield layer for medical and outdoor devices