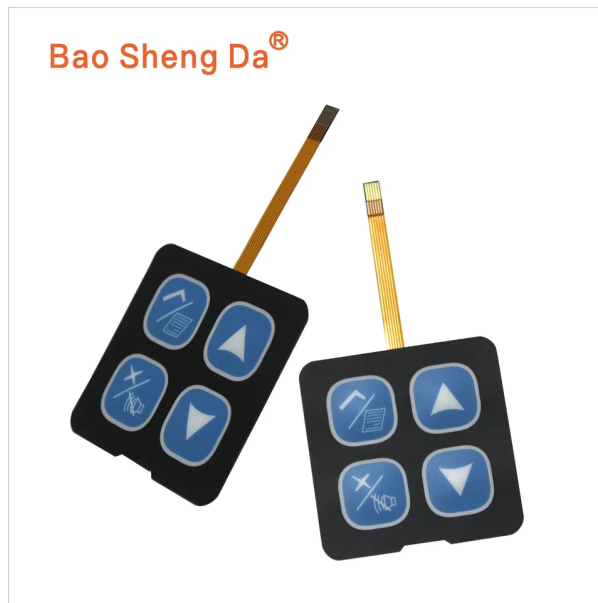


FPC membrane switches

Engineering review & quotation note | Revision 2026-10-13

Custom keypads with a flexible copper circuit, made to your panel drawing and PCB connection. Review the contact fingers, stiffener and installed tail route before sampling.

Send the connector model and housing details with your artwork. If either is still undecided, show us the available space and the options you are considering.



Two four-key FPC keypad samples with complete tails and exposed contact ends. Sample geometry is not a universal product specification.

Use this note with the current drawing and mating-connector datasheet. It is not a fixed performance specification or a test report.

Shenzhen Baoshengda Technology Co., Ltd.

Choose the circuit and construction

Buyer condition	Practical direction
Dense traces or a defined ZIF interface	Review an FPC circuit with controlled contact fingers, stiffener geometry and insertion evidence.
Simple static key matrix with generous space	A printed-silver membrane circuit may meet the need without adding FPC complexity.
Tail bends once during assembly	Either route may work; approve the actual exit radius, strain relief and service access in the housing.
Tail moves repeatedly in use	Do not assume a standard keypad tail is a dynamic-flex cable. Define movement, radius and cycle validation separately.
Harsh cleaning, moisture or outdoor exposure	The FPC circuit alone does not create a sealed product. Review overlay edges, adhesive land, tail exit and enclosure sealing together.

Example construction for review

Printed overlay. Legends, key areas and windows on PET or PC film.

Adhesive, spacer and key structure. Bonding and switch clearance; a metal dome is optional.

Flexible copper circuit. The FPC carries the key signals to the specified termination.

Rear mounting adhesive and equipment housing. Review the bonding area and rear support on the buyer's mating part.

Connector stiffening is local to the specified area. A bend needs its own clearance; adding a stiffener does not make a moving tail suitable for repeated flexing.

Review the mounted tail

Decision	What to confirm before sampling
ZIF pitch and contact side	Connector model, pin count, top or bottom contact, PCB orientation and insertion depth.
Stiffener length and thickness	Match the connector datasheet and leave enough rigid support without pushing the bend point into the housing wall.
Tail exit direction	Confirm whether the tail leaves from the top, side or rear of the overlay and whether the enclosure has a clean slot or radius.
Bend radius risk	Avoid a sharp fold at the adhesive edge, stiffener end or connector entrance. Check the assembled sample in the real housing.
Service access	Decide whether the operator can insert and lock the tail after the panel is bonded, especially in compact instruments.

Agree the sample-review evidence

Agree which checks and records are required before samples are built. Identify the drawing revision, mating connector and intended housing; do not assume every listed check is included.

- Released pin map and drawing revision
- Continuity result for the approved circuit
- Close photo of contact fingers and stiffener
- Connector insertion and lock-access check
- Mounted tail route and first-bend clearance
- Key operation after the panel is bonded
- Window, legend and overlay alignment
- Adhesive contact around cutouts and edges
- Buyer-defined cleaning or environmental checks
- Recorded deviation and resample decision when needed

Prepare an FPC quotation

Start your FPC keypad quotation with the panel drawing or sample photos, mating connector details, housing route and sample or production quantity. Include the other available information below so the circuit and mounted tail can be reviewed together.

- 2D drawing, 3D file, artwork or old sample photos
- Panel size, key layout, window areas and overlay material requirement
- Electrical function, circuit layout, pin count and connector type
- Tail exit location, tail length, bend direction and housing route
- Tactile or non-tactile key requirement
- Backlight, waterproof, EMI shielding or special reliability requirement
- Application environment and expected assembly method
- Prototype quantity, production quantity and target lead time
- ZIF connector model or datasheet, including pitch, contact side and lock type
- Stiffener thickness, exposed finger length and connector insertion direction
- Housing slot, available bend radius and any repeated-movement requirement
- Photos or notes showing how the tail will reach the PCB after the overlay is bonded
- Static-install, service-bend or repeated-movement duty for the tail
- Required sample evidence and acceptance limits for connector fit, key feel and enclosure assembly

If the connector is not fixed yet, include the available PCB space and any connector options under consideration.

Project-specific limits

Confirm dimensions, materials, environmental conditions and acceptance criteria for the project. Sealing depends on the complete assembly. Repeated tail movement needs a separate flex review.

Contact Baoshengda

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