



TOUCH PANELS

SPECIALIST MEMBRANE SWITCH MANUFACTURERS





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Welcome to Touch Panel Products

With over 30 years experience, Touch Panel Products, a division of Permasign Limited, lead the way in the design and production of membrane keypads and overlays.

Design

Touch Panels offer a specialist consultancy and design service to create a product tailored to individual requirements. Our early involvement in the planning of a new product, or the modification of an existing one, is a vital part of the expertise we have to offer.

All design aspects are discussed and approved prior to production. To ensure the accuracy of all design data, we generate full specification drawings using the very latest technology. This not only gives our Customers an excellent representation of the finished product, but also allows any details to be easily modified prior to manufacture.

Screen Printing

Our extensive screen printing facilities incorporate the most up-to-date automatic machines, together with purpose built UV and hot air combination dryers. All machines are fitted with anti-static eliminators and automatic film cleaners, to ensure a quality assured finished product.

All print artworks are produced on a high resolution laser image setter, guaranteeing image clarity in excess of 5000 dpi. These artworks are used to make the production stencils, ensuring that the printed material is of the highest standard.

Touch Panels have the capability to incorporate specialised features such as electroluminescent (EL) backlighting and linear potentiometers.

Platen Cutting

The individual layers are produced using laser-cut knife edge tooling in conjunction with our clam-shell platen presses. We also have the facility to produce low quantity prototypes, prior to obtaining production tooling.



<http://www.touchpanels.co.uk/>

Final Assembly

Our team of skilled assemblers, working in temperature and humidity controlled conditions, assemble the final product to precision tolerances. Membrane products can be manufactured as a stand alone item or mounted on to backplates or plastic enclosures.

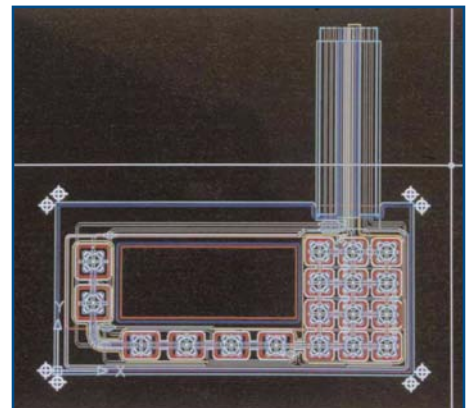
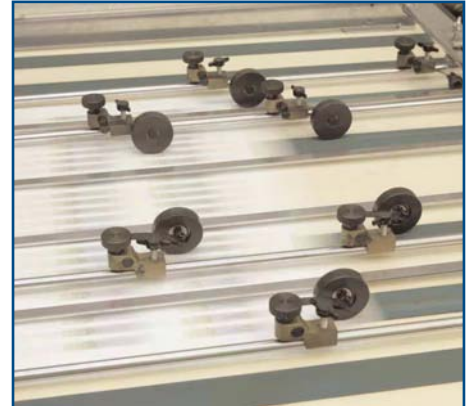
Quality Control

Our goal at Touch Panels is to manufacture a product to the highest standard. Total quality control in all stages, from design to final production, is the key to achieving this. We are dedicated to continually improving our quality management systems, ensuring that we fully comply with all of our Customers' requirements and specifications.

All membrane switches are 100% tested for correct key codes, resistance range and shorts, using our computerised test facility. Visual inspection is carried out at key stages of our manufacturing process, and every finished product is subject to scrutiny prior to being packed for despatch.

Touch Panel Products offer a total service, from initial concept through to prototypes and volume production.

You are invited to visit our premises to view our design and production facilities at first hand. Call now to discuss your project and make an appointment.





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Membrane Switch Key pads

A membrane switch is a normally open, momentary contact device made up of three layers; an upper flexible contact, a stationary lower contact, and an insulator to hold the contacts apart until pressed.

An additional layer can be added to the basic construction to display custom graphics. The graphic layer can be printed with a wide range of colours, provide viewing windows for sub-mounted displays, and have various types of embossing applied.

Membrane Switch Options

- Backplates (a range of materials and finishes available)
- Colours (virtually any requirement can be met, please quote Pantone references if possible)
- Connection (our standard SIL 2.54mm / 0.10" pitch female connector or custom pitch without connector)
- Embossing (Braille, logo, pillow or rim emboss)
- Shielding (additional ground plane to protect against EMI / RFI emissions and ESD)
- Tactile feedback (dome embossing, steel dome inserts, non-tactile)
- Windows (clear or coloured, varnished for clarity of diffused)

Membrane Switch Specifications

Contact resistance	< 2 ohms per 25mm of track length at 1mm width
Contact bounce	< 5 m/s
Contact rating	1 watt maximum at 0-30 V, 0-100 mA, 1 minute test
Operating life	1-20 million operations, depending on specification
Storage temperature	-65° C to +85° C (-65° C to +50° C for embossed)
Operating temperature	-45° C to +75° C (-45° C to +45° C for embossed)
Operating humidity	No effect at 95% RH
Storage altitude	0 - 15,000m
Operating altitude	0 - 4,500m



TOUCH PANELS PRODUCTS

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