

Glass for Control Panels for Human Machine Interfaces

Get inspired by the possibilities of glass for intuitive and modern user interface solutions



Product Description:

Glass is the preferred material for modern human machine interface solutions because of the wide variety of design options and the easy integration of electronics components, e.g. capacitive switches, touchless operation, TFT displays, sensors, and LED lighting. The premium look of glass and its high durability are important for innovative user interfaces which often combine display units, touch switches, lighted icons, etc...

The new generation of electronic devices needs user interface concepts with an operating logic that is intuitive and easy to control. These concepts offer users a more convenient way to operate devices, even with today's complex functionalities.

SCHOTT offers a wide range of solutions for glass control panels for intuitive user interfaces that meet customer design requirements and is a reliable partner for transferring product ideas into ready-to-market products. The available design features include various surface finishes, innovative printing options, integration of tactile feedback and haptic effects, semitransparent printing for bright light effects, circuits printed directly onto the glass and more that device manufacturers enable the design of individual and intuitive control panels for their appliances.

Applications:

- Home Appliances
- Living
- Vending machines
- Medical devices
- Coffee machines
- Fitness equipment
- Home automation
- Sanitary fittings



Display area can easily be integrated within a printed glass surface

Benefits:

- Wide variety of design options
- Extremely long-lasting, no visible aging effects
- Easy integration of different switch options: touch buttons or touchless operation with sensor controlled infrared switch
- Easy integration of optical, tactile, and acoustic feedback for electric switches
- Easy to clean surfaces
- Perfect protection of switches against water penetration behind a jointless glass surface
- Hygienic: smooth surface to avoid dirt and bacteria build up
- Sound scaling-up of new products while ensuring consistent product quality
- High mechanical and chemical resistance

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Gemtron

Features and Design Options



Tactile feedback solutions available

Design Options

- Printing with standard enamel or organic colors
- Integration of symbols: minimum line thickness 0.5mm; other thicknesses on request
- Special surface finishes: metallic look, silky and mirror effects
- Semitransparent colors for integration of bright light effects
- Dead front effect (black or grey) for backlit symbols, touch sensors and 7-segment displays: visibility of symbols and displays only in switched on status; one homogenous black surface when switched off
- Special glass processing for flush-fit installation of glass panels
- Haptic surface effects: smooth satin or brushed metal
- 3D effects: front side printing or mirror coating combined with rear side printing

Feedback Options for electric switches

- SCHOTT Smart Touch: cavities for tactile feedback of switches are available in 3 shapes (point, circular, slider) and in various sizes
- Haptic printing effects for user guidance

Electric Features

- Printed circuits, sensor areas for capacitive switch buttons for easy connection to electronic components
- Sensor areas for infrared sensors (for both touch and touchless switches)
- Printed heating circuits

General Features

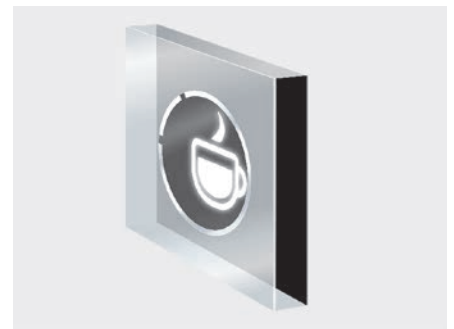
- **Glass size**
Minimum size: any rectangular glass sheet with a diagonal >220mm
Thickness: 3-10mm
- **Possible glass substrates**
All glass types can be used as a substrate
- **REACH RoHS compliance**
Our glass solutions for control panels fully comply with Reach and RoHS directives



Symbols for indicating the functional status of an appliance



Circuits printed directly onto glass for easy connection to electronic components



3D effects: color printing or mirror coating (SCHOTT® SeeClear) on front side combined with rear side printing