

DATA SHEET MULTI-TOUCH ZYBRID®

Fully customisable in any quantity, ZyBrid® touch sensors are based on our durable multi-touch Projected Capacitive Technology (MPCT™)

FEATURES

- Wide variety of glass types and thickness options available
- Ability to create a fully sealed design that complies with NEMA 4, 12 and IP 65 standards
- Size range from 5" to ~90"
- Up to 100 independent touch points when used with ZXY500™ controllers
- Excellent light transmission and optional enhancements, such as anti-glare, anti-reflection, UV/IR blocking, mirror, etc.
- Compatible with multi-touch supporting operating systems including Windows, Linux and Android
- Customisable options including various glass thicknesses and surface treatments, printed borders and curved glass

BENEFITS

- Highly durable, vandal and scratch resistant
- Fast and accurate response times
- Performance unaffected by moisture and surface contaminants
- Operational with gloved and un-gloved finger
- Drift-free operation - no recalibration required
- Increased reliability and life expectancy
- Multi-touch / multi-user performance
- Sophisticated palm-rejection capability minimises 'false' touches

OPERATION

The MPCT™ touch sensor is divided into a matrix of transmitting (Tx) and receiving (Rx) cells, created from embedded 10µm copper electrodes, which are near invisible to the human eye when mounted over a powered display. These are connected to a Zytronic controller and a charge is applied to the Tx cells.

When a finger or conductive stylus approaches the surface of the sensor, some of the Tx charge is diverted and a reduced charge is received by the Rx cells beneath the fingers/stylus; the position is then determined by the controller and its firmware. Unlike many touch technologies, the sensing elements of the MPCT™ sensor are safely protected behind the front screen, ensuring long life, and stability.

The unique sensing characteristics of MPCT™ sensors eliminates the need for an operating force, providing users with the same levels of touch sensitivity as enjoyed with smartphones and tablet PCs but on a much larger scale, and capable of operation in almost any environment.

APPLICATION

Zytronic's ZyBrid® touch sensors are a durable and cost effective method to meet today's demanding touchscreen requirements. The construction is resistant to damage caused by moisture, heat and surface contaminants making the ZyBrid® the perfect choice for either indoor or outdoor multi-user applications.



SENSOR

Detection method	Projected Capacitive Technology (MPCT™) mutual capacitive type
Sensor	Glass with embedded micro-fine sensing array
Control electronics	Remotely sited PCB, USB connectivity
Size range	5" to -90"
Optical resolution	>4 lines/mm (NBS1963A)
Light transmission	-90% without anti-reflective enhancement
Haze	<3% (Gardner Haze) If anti-glare glass specified

CONTROLLER

See data sheets for ZXY500™ touch controllers

MECHANICAL

Immunity to damage	Glass surface with no moving parts
Sensor thickness	Up to 12mm
Stylus type	Finger (gloved or un-gloved) and conductive stylus
Operation force	<0.1g
Hardness	Glass hardness – Mohs 7
Sensor	MTBF Glass with no moving parts or coatings No known wear out mechanisms
Sealing	Can be sealed to meet NEMA 4, 12 and IP 65 standards
Vibration	In accordance with IEC 60068-2-64 when installed in a suitable bezel
Options	Various glass types and thicknesses available; custom screen printed borders/logos; flat or curved glass; drill holes, slots and edge profiles

ENVIRONMENT

Operating temperature	-35°C to +70°C
Humidity	RH 0-90% up to 40°C
Storage temperature	-40°C to 80°C
Storage humidity	RH 0-90% up to 40°C
Resistance to contamination	Sensing media protected by glass, exceeds requirements of ASTM-F1598-96
Water resistance	Unaffected by water droplets or condensation

QUALITY

See cosmetic specification at zytronic.co.uk

APPROVALS

RoHS compliant, CE, FCC & UL approved