



ZYTRONIC DATA SHEET

ZyBrid®

ZyBrid® touch sensors are based on our award winning embedded Projected Capacitive Technology (PCT™), and using the latest cold lamination process.



ADVANTAGES

- Highly durable, vandal and scratch resistant
- Fast and accurate response times
- Performance unaffected by moisture and surface contaminants.
- Operation with gloved and un-gloved finger.
- Drift-free operation - no recalibration required.
- Increased reliability and life expectancy.
- A fully laminated, embedded sensing construction that is highly durable, vandal and scratch resistant.
- Operation with gloved and un-gloved finger.

FEATURES

- Chemically, physically and mechanically inert glass touch surface
- Ability to create a fully sealed design that complies with NEMA a, 12 and IP 65 standards
- Size range from 5" - 85"
- Single and Dual touch performance when coupled with a ZXY100™ controller
- Excellent light transmission with optional optical coating enhancements
- Compatible with a variety of operating systems including Linux
- Customisable options including, glass thickness and surface treatment, printed borders and customer logo's.

OPERATION

The electronic controls effectively divide the screen into pixel-sized sensing cells, using an array of embedded microfine single track electrodes, which are not ITO based, and are near invisible to the human eye on a powered display. These tracks are connected to an electronic controller board, and an oscillation frequency is established for each track.

When a finger or conductive stylus approaches the surface of the sensor, a change in the oscillating frequency of the tracks around that particular point is registered; the position is then determined by the controller and firmware combination. Unlike conventional capacitive systems the active component of PCT™ is embedded behind the front substrate, ensuring protection, long life, and stability.

The unique sensing characteristics of PCT™ sensing eliminates the need for an operating force. Users are therefore not required to use credit cards, pens and other potentially damaging implements to activate the sensor.

APPLICATIONS

Zytron's ZyBrid® touch sensors are a durable and cost effective method to meet today's demanding touch screen requirements. The construction is resistant to damage caused by moisture, heat and surface contaminants making ZyBrid® the perfect choice for signage, leisure, retail applications whether indoors or outdoors.

INNOVATIONS

We are now pleased to announce our new Multi Touch ZyBrid® sensors capable of detecting up to 40 independent touches, whilst still offering the same great durable performance. For more information see Multi Touch ZyBrid® data sheet.



SENSOR

Detection Method	Projected Capacitive Technology (PCT™) self capacitive type
Sensor	Glass with embedded micro-fine sensing array
Control electronics	Remotely sited PCB, Serial or USB connectivity
Size range	5" - 85"
Optical Resolution	>4 lines/mm (NBS1963A)
Light Transmission	~90%
Haze	<3% (Gardner Haze) If Anti glare glass specified

CONTROLLER

See data sheet for ZXY100® touch controller

MECHANICAL

Immunity to damage	Glass surface with no moving parts
Sensor thickness	1 - 10mm
Stylus type	Finger, gloved hand 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	www.zytronic.co.uk
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APPROVALS

RoHS compliant	
CE, FCC & UL approved	www.zytronic.co.uk/support/quality-assurance

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