



# ZYTRONIC DATA SHEET

## ZyTouch®

Utilising Zytron's lamination expertise, **ZyTouch®** touch sensors are designed to provide the highest levels of protection against a wide range of physical threats. The touch sensors are accurate, highly durable and are available in custom designs.



### ADVANTAGES

- Unsurpassed impact, vandal and scratch resistance
- Ideal for public use and external applications
- Operation with gloved and un-gloved finger.
- Drift-free operation - no recalibration required.
- Increased reliability and life expectancy.
- Unaffected by moisture and surface contaminants
- Ability to create sealed designs that comply with NEMA 4, 12 and IP65 standards or higher

### FEATURES

- Thick laminated construction
- Chemically, physically and mechanically inert glass touch surface
- Size range from 5" - 85"
- Up to 40 independent touch points when used with ZXY150/200/300 controllers
- Excellent light transmission and optional optical coating enhancements
- Compatible with a variety of operating systems including Linux
- Customisable options including, glass thickness and surface treatments.

### OPERATION

The screen is divided into an X-Y matrix of sensing cells, using an array of embedded 10µm copper electrodes, which are near invisible to the human eye on a powered display. These electrodes are connected to a remotely mounted controller board, and an oscillation frequency is established for each trace.

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

With the unique Z-axis (or depth) sensing characteristics of PCT™, **ZyTouch®** sensors can be tuned by the user to eliminate the need for an operating force, and will detect a touch through very thick glass, even from a gloved hand.

### APPLICATIONS

**ZyTouch®** sensors are proven to meet today's demanding touch requirements for vandal prone, outdoor applications, such as ATM's, ticket machines, medical displays, industrial displays, pay-at-pump fuel dispensers, and street level kiosk systems.

The touch sensor is uniquely durable and dependable, the construction protecting the sensing elements against vandalism. The **ZyTouch®** touch sensor is the most robust sensor based on Zytron's embedded Projective Capacitive Technologies (PCT™ and MPCT™)

# ZyTouch® SPECIFICATION



## SENSOR

Detection Method	Projected Capacitive Technology (PCT™) self capacitive or Mutual Capacitive (MPCT™) types
Sensor	Multi layer 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% without Anti Reflective enhancement
Haze	<3% (Gardner Haze)

## CONTROLLER

See data sheet for ZXY100®, ZXY110® (Single/Dual touch operation) or ZXY150™, ZXY200™ or ZXY300™ (Multitouch operation) touch controller

## MECHANICAL

Immunity to damage	Glass surface with no moving parts
Sensor thickness	From 3mm to approx. 30cm
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 standards	Can be sealed to meet NEMA 4, 12 and IP 65
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; drilled 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	<a href="http://www.zytronic.co.uk">www.zytronic.co.uk</a>
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## APPROVALS

RoHS compliant	
CE, FCC & UL approved	<a href="http://www.zytronic.co.uk">www.zytronic.co.uk</a>

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Company No: 379908. Registered in England. VAT No: GB 746 4858 88

Whiteley Road  
Blaydon on Tyne  
Tyne & Wear  
NE21 5NJ  
United Kingdom

T: +44 (0) 191 414 5511  
F: +44 (0) 191 414 0545  
E: [info@zytronic.co.uk](mailto:info@zytronic.co.uk)

[www.zytronic.co.uk](http://www.zytronic.co.uk)