

MicroTouch™ ClearTek™ II



Capacitive Touch System

Product Highlights

- Excellent light transmission of 91.5% ($\pm 1.5\%$) provides vibrant optical characteristics with optimal anti-glare properties
- Resilient top coat provides smooth, easy glide surface while offering durable scratch resistance
- The accuracy, durability, and fast touch response expected from a MicroTouch™ ClearTek™ II product.
- Performance unaffected by everyday contaminants in the environment

Better by Design

Known for innovative technology and products, 3M Touch Systems has leveraged decades of capacitive technology experience to create the MicroTouch™ ClearTek™ II Touch System. Based on a complete re-engineering of the 3M-patented Profile design, the ClearTek™ II touch system offers optimized optics, facilitates display integration and creates a more environment-friendly touch system.

ClearTek™ II touch screens, combined with the solid foundation of MicroTouch™ EX II electronics and robust MicroTouch™ software offer high endurance solutions for a multitude of touch applications where exceptional performance, vibrant optics and environmental robustness is mission-critical, 24/7.

The Clear Difference

3M Touch Systems offers a wide portfolio of touch technologies and touch products with a commitment to ease of integration, responsiveness, reliability and simplicity of use. With its world-class support and service organization, 3M provides expert technical consulting service and support wherever any of our products are designed, integrated or delivered. It is this complete solution approach that ensures remarkable compatibility and exceptional service, backed by 3M.

MicroTouch™ ClearTek™ II Capacitive Touch System

Performance		Mechanical (continued)
Input Method	Finger input	NEMA Rating NEMA sealable
Accuracy*	Reported touch coordinates are within 1.0% of true position (based on the diagonal dimension of the screen) within the precision area when linearized and used with MicroTouch™ EX II Series Touch Controllers	Gasketing Complete water-resistant seal obtainable with polyethylene gasket. Please consult ClearTek™ II integration guide for further details
Resolution	Touch screen resolution defaults to settings in the electronics and software, generally 1024 x 1024, but capable of 16K x16K when used with EX II electronics	Mounting Please consult MicroTouch™ ClearTek™ II Integration Guide for specific mounting instructions.
Linearization	Factory linearization values are stored in the attached controller, represented in a 2D bar code, or in the touch screen NOVRAM when present	Cleaning Water, isopropyl alcohol, or similar non-abrasive cleaners
Optics		Reliability
Light Transmission**	91.5% light transmission (±1.5%)	Surface Obstructions Touch screens operation withstands surface contaminants such as, dirt, dust and grease
Surface Finish	ClearTek II hard coat with optimal anti-glare properties. Scratch resistant top coat provides smooth, easy glide touch surface	Chemical Resistance ClearTek™ II is highly resistant to a variety of solvents, acids, and household chemicals in accordance with ASTM-D-1308-02 ^{e1} and ASTM-F-1598-95 (reapproved 2002)
Mechanical		Liquid Resistance Liquids on screen do not impede touch screen performance
Minimum Contact Requirement	5.4 ms for finger input with EX II series controller	Operating Temperature -40° C to 70° C for the touch screen
Glass Thickness	3.18mm (±0.25mm) typical. (Glass only, not including flexible tail connection; reference touch screen drawing for details.)	Storage Temperature Always store the touch screen in its original shipping container between -50°C and 85°C (up to 90% RH from 0° C to + 35° C). Never store touch screens in an environment where condensation may form
Display Size Supported	6.4" to 32" diagonal (4.3, 16:9, 16:10)	Humidity Up to 90% RH from 0° C to +35° C, non-condensing
Surface Scratch Hardness	A Mohs pick with a hardness rating of 7 or higher is required to induce a scratch which will cause a functional failure. Functionality unaffected by severe abrasion per MIL-C-675-C, exceeding number of specified cycles. Functionality unaffected by 10,500 grams of force per Balance Beam Scrape Adhesion Mar Tester with loop stylus	

* Achievement of the listed specifications has been demonstrated in monitor integrations where the touch screen is mounted to monitor frame such that the spacing between the touch screen and monitor screen does not vary due to compression / expansion from touch forces or temperature changes.

** Test uses BYK Gardner Haze Gard Plus.

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