

3M™ MicroTouch™ System SCT7650EX

Rugged Solution for Impact Strength and User Safety

The 3M MicroTouch System SCT7650EX is a rugged version of 3M's industry-leading surface capacitive system, the 3M™ MicroTouch™ System SCT3250EX, which is created by laminating 4mm backer glass with optically-clear adhesive to a 3M™ MicroTouch™ Sensor SCT7650. This robust laminated sensor, for applications ranging from 10 to 32 inches, is specifically designed to withstand heavy abuse in vandal-prone environments while providing excellent light transmission.

This sensor's optimized design offers 86.5% light transmission for brighter, crisper display images (compared to 81% for typical rugged surface capacitive sensors), while providing superior impact resistance by exceeding the UL 60950-1 certification (500 gram steel ball dropped from 1.3 meter height). In the event of a sensor breaking by extraordinary impact, the laminated construction is designed to help protect the user from glass shards by holding the multi-layered sensor together.

The systems' sophisticated 3M™ MicroTouch™ Controller EX provides superior touch speed performance and industry-leading reliability. This controller is well known for its < 5.4 milliseconds response time and "intentional touch" capability, where false touches don't register if a user's finger hovers over the screen or from inadvertent screen contact with jewelry, clothing or other personal items.

With the widest operating- and storage-temperature range available, NEMA 4 / IP 66 sealing, and superior performance in the presence of surface contaminants and debris, the 3M MicroTouch System



Recommended Applications

- ATMs
- Unattended Kiosks
- Point-of-Information
- Retail Self-Service
- Outdoor ATMs
- Outdoor Kiosks
- Taxi Seatback Access/Payment
- Vending Machines

SCT7650EX is ideal for unattended kiosks, outdoor ATMs, and high-use, environmentally-demanding applications, and provides flexibility for system designers requiring a robust touch system solution.

| Feature | Benefit |
|---|--|
| Laminated Construction Sensor Design | <ul style="list-style-type: none"> • Exceeds industry-standard steel ball drop test for impact resistance making it ideal for unattended, vandal-prone environments • Shatter-resistance construction offers user safety if the touch sensor is broken |
| All-Glass Solution with 3M ClearTek Hard Coat | <ul style="list-style-type: none"> • Up to 5.5% higher light transmission than typical ruggedized surface capacitive solutions for superior display performance • Superior surface durability maintains optical and functional performance over the life of the product |
| 3M MicroTouch Controller EX Electronics | <ul style="list-style-type: none"> • Industry-leading touch response for up to 2X faster response time • Proprietary ASIC minimizes component count and achieves higher MTBF • Proven electronics with an extensive installed base assures continued high performance |
| Scratch-resistant Top Coat | <ul style="list-style-type: none"> • Reduces surface energy for improved resistance to surface scratches • Smooth surface allows for improved scroll performance • Durable finish provides excellent chemical resistance and an easy-to-clean surface |

3M™ MicroTouch™ System SCT7650EX Specifications

System Performance

| | |
|--------------------|--------------------------------|
| Light Transmission | 86.5% (±2%) |
| Input Method | Finger input |
| Accuracy | >99% of true position |
| Resolution | 16k x 16k (maximum resolution) |
| Linearization | Factory linearized |
| Tail Connection | Solder-less design |

Electronics (3M MicroTouch Controller EX)

| | |
|--------------------|---|
| Communication | USB and Serial |
| Dimensions | 1.3" (33.02 mm) x 2.4" (60.96 mm) REF |
| Operating Current | 75 mA (typical) |
| Sleep Current | < 500 uA |
| Power Connection | USB BUS (5V) or 5V/12V Serial |
| Connectors | 5-pin AMP (Touch side) 5-pin or 7-pin Molex (COM side) |
| ESD | ±8KV Contact, ±30KV Air |
| Point Speed (PPS) | 200 pps (typical) |
| Minimum Touch Time | < 5.4 ms |
| MTBF | >700,000 hours |

Reliability

| | |
|-----------------------|---|
| Surface Obstructions | Withstands most surface contaminants |
| Chemical Resistance | ASTM-D-1308-02 and ASTM-F-1598-95 |
| Impact Resistance | Steel ball drop test UL 60950 |
| Liquid Resistance | Liquids on screen do not impede touch performance |
| Operating Temperature | -40° C to 70° C |
| Storage Temperature | -50° C to 85° C |
| Humidity | Up to 90% RH from 0° C to 35° C, non-condensing |

Mechanical

| | |
|--------------------------|---|
| Glass Thickness | 0.298" (7.57 mm) |
| Display Size Supported | 10.4" (264.16 mm) to 32" (812.8 mm) (standard and wide formats) |
| Surface Scratch Hardness | MoHS 7 or higher to induce a functional failure |
| Scratch Resistance | Proprietary top coat |
| Sealing | NEMA 4X / IP66 |
| Gasketing | Complete water-resistant seal compatible |
| Cleaning | Water, isopropyl alcohol, or similar non-abrasive cleaners |
| RoHS Directive compliant | Yes |

System Warranty

5 years

3M Touch Systems

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JONHON

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