

Transduction

TR-TOUCH-15R

5-Wire Resistive Touch Screen



Anti-Glare Resistive Touch Screen for Industrial 15" LCD Monitors and Computers

The TR-TOUCH-15R is a 5-wire anti-glare resistive touch screen that uses a display overlay composed of layers, each with a thin metallic conductive coating on the interior surface. Special separator dots are distributed evenly across the active area and separate the conductive interior layers. The pressure from using a finger or stylus pen produces internal electrical contact which supplies the touch controller with vertical and horizontal voltages for data input.

- Use in industrial, process control, medical, military and nuclear applications
- Superior accuracy, performance and durability
- Long life expectancy; > 30,000,000 touches
- Strong resistance to external static electricity and noise in poor conditions
- Clean original images by using films with excellent transmission
- Easy integration with the unique innovative design of a slim sensor border
- Can be gasket sealed for NEMA 4 environments

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Specification

Model

- TR-TOUCH-15R 15" Anti-Glare Resistive Touch Screen

Interface

- Serial (RS-232), USB

Structure

- ITO Film Type: Anti-Glare 3H (pencil hardness)
- ITO Film Thickness: 0.188mm (0.007") ±10%
- ITO Glass Thickness: 1.8mm (0.071") ±10%

Connector

- FFC (Flexible Flat Cable) tail
- 5-pin, Pitch: 2.54mm (0.10"), Length: 260mm (10.24")

Double-Sided Adhesive Tape

- Thickness: 80Fm

Sensor Size

- 15 inch
- Active Area: 304.5mm (H) x 228.5mm (V) (11.99" x 9.00")
- Overall Area: 328.0mm (H) x 250mm (V) (12.91" x 9.84")

Input Method

- Finger, gloved finger or stylus pen

Operating Force

- Pen: < 80g (0.18 lbs) (polyacetal)
- Finger: < 80g (0.18 lbs) (silicon rubber)

Surface Hardness

- Pencil hardness 3H or more

Glass

- Normal type ITO coating glass

Resistive TSP Controller

- Circuit Board Dimensions: 20mm x 75mm (0.79" x 2.95")
- Power Requirements: 5VDC max.100mA, typical 70mA, 50mV peak to peak max. ripple
- Interface: Serial (RS-232), USB
- Resolution: 2048 x 2048

- Report Rate: RS-232 - max. 160points/sec, USB - max. 250points/sec
- Response Time: max. 20ms
- Attached Cable: 6' shielded cable with USB-A connector for USB port
- Operating Temperature: -25 ~ 85°C (-13 ~ 185°F)
- Humidity: 95% @ 60°C (140°F)
- Regulatory Approvals: FCC-B, CE
- EMI: unaffected by environmental EMI

Writing Test

- 100,000 times with polyacetal stylus pen R0.8
- Force: 250gf
- Speed: 60mm/sec

Hitting Test

- 1,000,000 times with electric silicon rubber R0.8
- Force: 250gf
- Speed: 2 times/sec

Drop Test

- No breakage, 227g (0.50 lbs)/38Φ steel ball dropped on touch panel supported w/ display module from 80cm (31.5") height at 1 time

Light Transmittance

- More than 81% (550 wavelengths, according to JIS K 7361)

Haze

- Anti-Glare 7.0 ±1.0% (JIS K 7136)

Linearity

- "X" Axis: 1.5% or less
- "Y" Axis: 1.5% or less

Resistance Between Leads

- Direction "X" (Glass Side): 50~300Ω
- Direction "Y" (Glass Side): 50~300Ω

Operating Temperature

- 20 ~ 60°C (-4 ~ 140°F)
- Humidity: 20% ~ 90%, non-condensing

Storage Temperature

- 30 ~ 70°C (-22 ~ 158°F)
- Humidity: 20% ~ 90%, non-condensing

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Specification (Cont'd)

Resistance to Chemicals (Surface Hard Coating)

| Property | Specification | Test Method |
|---------------------|--|--|
| Acetone | Change in $\Omega/\text{sq.}$ < 3% | 10 Min. 25°C (77°F) |
| Isopropyl | Change in $\Omega/\text{sq.}$ < 3% | 10 Min. 25°C (77°F) |
| Toluene | Change in $\Omega/\text{sq.}$ < 3% | 10 Min. 25°C (77°F) |
| Boiling Water | Change in $\Omega/\text{sq.}$ < 4% | 10 Min. |
| Curling Test | < 20mm (0.79") | 450mm x 450mm (17.72" x 17.72") 130°C (266°F) for 30 min. measured at corners |
| Humidity Resistance | Change in $\Omega/\text{sq.}$ \pm 8% | 24 hours 60°C (140°F) 85% |

Compatible with Windows NT/9x/ME/2000/XP/2003/
VISTA/7, DOS, QNX and LINUX