

19.1" Flat Panel Industrial Displays

Features

- **Industrial Grade** for demanding environments.
- **Precision-milled, Heavy-duty Bezels** ensure longer display life.
- **3/8" Thick-viewing Windows** are bulletproof and scratch-resistant.
- **Patented *TILTScreen*[™]** eliminates glare from overhead light sources.
- **Longlife Backlights** ensure trouble-free operation.
- **Multiple Touchscreen Options** for different applications and environments.
- **Easy upgrade of CRT to Flat Panel** without any cabinet modification.
- **Powder-coated 3/8" Thick Aluminum Bezels** are extremely durable and maintain appearance.
- **Polished Stainless Steel Bezels** are precision-milled from 1/4" plate.
- **Custom Colors and Private Labeling** for OEM manufacturers.
- **Available from Stock** in every configuration.



NEMA 4X



NEMA 4



NEMA 12 with *TILTScreen*[™]

Industrial Strength

STRONGARM's Flat Panel Displays are designed to survive the most demanding industrial applications. Because the display elements are built into precision-milled, solid aluminum or stainless steel bezels, they remain secure and free from stress. The possibility of life-shortening display deformation is significantly reduced when installed in a panel cut-out.

Current Technology

Unlike most other display offerings, STRONGARM displays are updated to the current technology immediately. You can be sure that the STRONGARM display you purchase today is not yesterday's trailing edge.

Unique *TILTScreen*[™] Technology

When overhead lighting poses a problem, the *TILTScreen* feature allows you to position the display to eliminate glare and maximize viewing. Positioning is smooth and precise since only the display tilts.

STRONGARM
www.strongarm.com

19.1" Flat Panel Industrial Displays

Touchscreen Specifications

Resistive Touchscreen *(for 90% of all touchscreen applications)*

The Resistive Touchscreen uses a glass panel overlay with a uniform resistive coating. A polyester coversheet is tightly suspended over the top of the glass, separated by small, transparent insulating dots. The coversheet has a hard durable coating on the outer side and a conductive coating on the inner side. When the screen is touched, the conductive coating makes electrical contact with the coating on the glass. The voltages produced are the analog representation of the position touched. The controller digitizes these voltages and transmits them to the computer for processing.

Touch Activation Force	Less than 4 ounces, typical
Accuracy	0.080 inches, typical 0.180 inches, minimum
Touchpoint Density	4096 x 4096 or > 100,000 touchpoints/inch
Temperature	Exceeds display rating

Infrared Touchscreen *(for applications where touchscreen is exposed to extreme abuse)*

The Infrared Touchscreen relies on the interruption of an IR light grid in front of the display screen. Integrated into the display bezel is an opto-matrix frame that contains a row of IR-light emitting diodes (LEDs) and photo transistors, each mounted on two opposite sides to create a grid of invisible infrared light. The opto-matrix frame is isolated from the outside environment by an IR transparent barrier. The IR controller sequentially pulses the LEDs to create a grid of IR light beams. When a stylus, such as a finger, enters the grid, it obstructs the beams. One or more of the phototransistors detects the absence of light and transmits a signal that identifies the X and Y coordinates. Because the infrared scanning is done in front of the display, a bulletproof, 3/8" thick polycarbonate window is installed between the IR grid and the display itself. This window provides a level of environmental protection for the electronics that is unique to the infrared touchscreen technology.

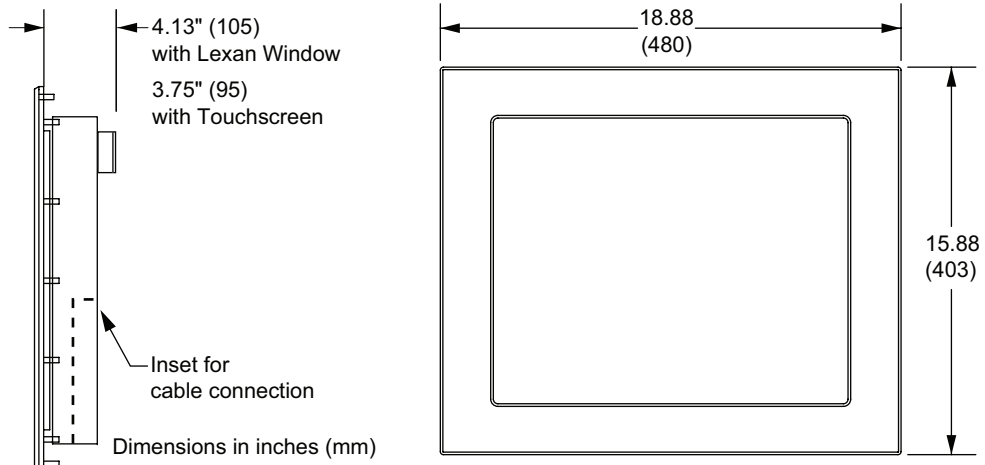
Touch Activation Force	No minimum required
Accuracy	0.047 inches (21 points/inch) typical, using stylus greater than ¼ inch diameter 0.22 inches (5 points/inch) minimum
Stylus	¼ inch diameter, minimum
Display Window	3/8 inch Lexan brand polycarbonate with Marguard surface treatment
Temperature	Exceeds display rating

Surface Acoustic Wave Touchscreen *(safest touchscreen for hazardous area applications)*

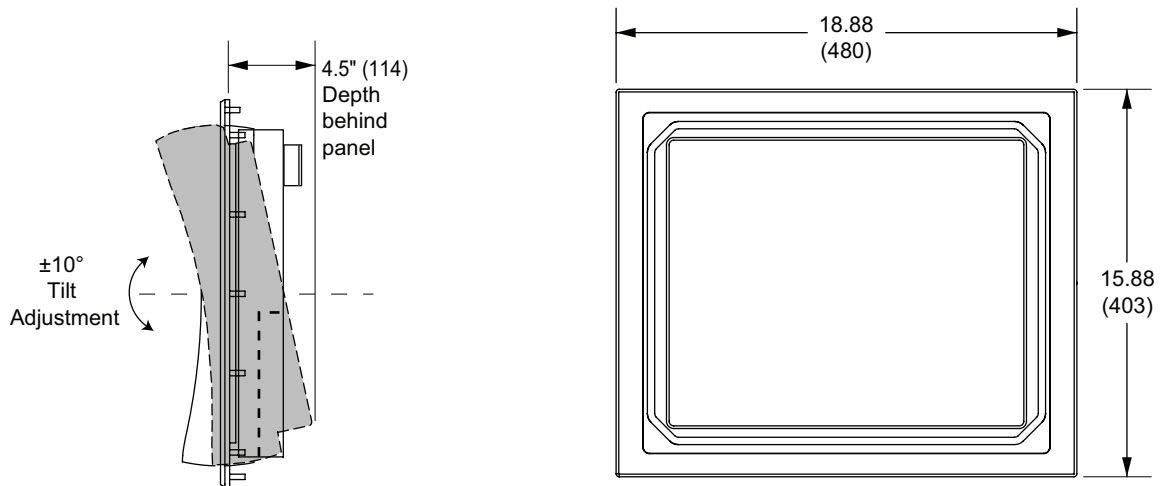
The Surface Acoustic Wave (SAW) Touchscreen has a glass overlay with a grid of transmitting and receiving piezoelectric transducers. The touchscreen controller sends a 5 MHz electrical signal to the transmitting transducer, which converts the signal into ultrasonic waves within the glass. When the screen is touched, a portion of the wave traveling across it is absorbed, thus changing the received signal. The signal is then compared to a stored reference signal, the change recognized, and a coordinate calculated. The process happens independently for both the X and Y axes. By measuring the amount of the signal that is absorbed, a Z-axis is determined.

Touch Activation Force	2 to 3 ounces (55 to 85 grams), typical
Accuracy	Extremely consistent, very stable, no drift
Touchpoint Density	4096 x 4096 touchpoints/inch
Temperature	Exceeds display rating

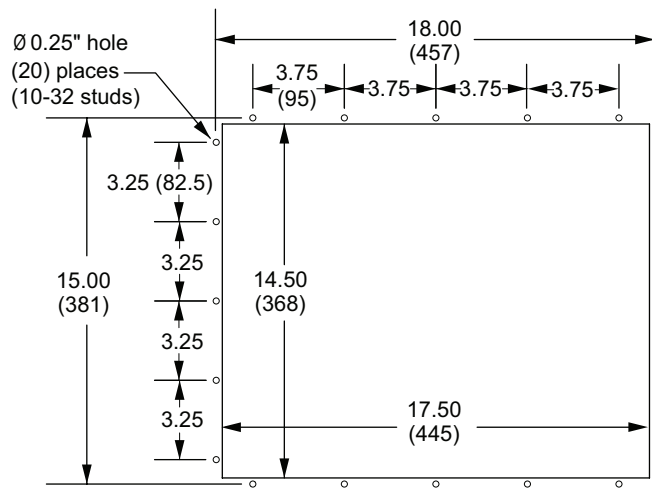
Dimensions



NEMA 4 and NEMA 4X



NEMA 12 with TILTScreen™



Panel Cut-Out

19.1" Flat Panel Industrial Displays

Specifications

Display

Size:	19.1"
Brightness:	250 nits
Contrast Ratio:	600:1
Resolution:	1280 x 1024
Colors:	16.7 M

Power

Consumption	34W
Input	AC 100-240V~ 50/60Hz

Environmental

Operating Conditions

Temperature	32°F to 122°F (0°C to 50°C)
Humidity	10 % to 80 % non-Condensing

Storage Conditions

Temperature	-4°F to 149°F (-20°C to 65°C)
Humidity	5 % to 95 % non-Condensing

Ordering Information

304-191000	19.1" NEMA 4
304-191T00	19.1" NEMA 4 with Resistive Touchscreen
304-191W00	19.1" NEMA 4 with Surface Acoustic Wave Touchscreen
304-1910L0	19.1" NEMA 12 with <i>TILT</i> Screen™
304-191TLO	19.1" NEMA 12 with <i>TILT</i> Screen™ and Resistive Touchscreen
404-191000	19.1" NEMA 4X (Stainless Steel)
404-191T00	19.1" NEMA 4X with Resistive Touchscreen
404-191R00	19.1" NEMA 4X with Infrared Touchscreen
404-191W00	19.1" NEMA 4X with Surface Acoustic Wave Touchscreen
Consult Factory	CRT Upgrade to 19.1" Flat Panel Displays