

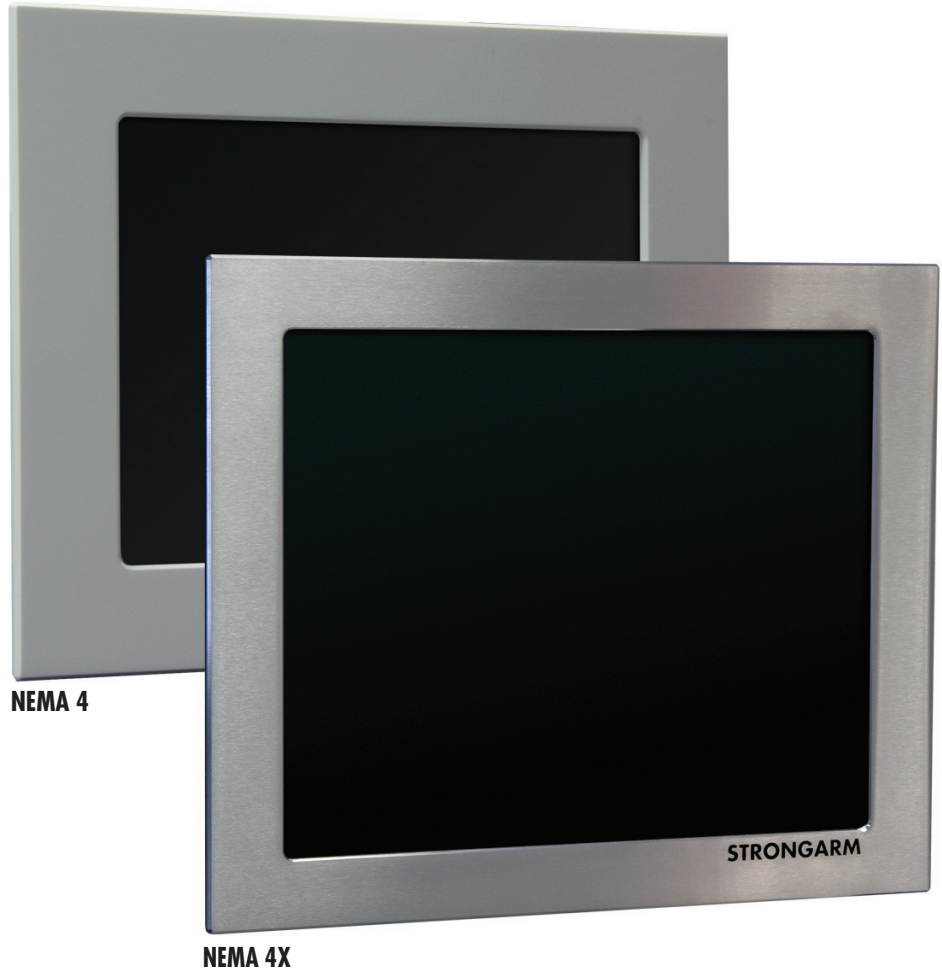
## DATA SHEET

# 19.1" G-Series Flat Panel Industrial Displays

Premium Quality STRONGARM Built Displays (NEMA 12/4/4X)

### Features

- ▶ Designed for harsh and demanding **industrial environments**.
- ▶ **NEMA 4/4X** for washdown and wipedown applications.
- ▶ **Precision-milled, Heavy-duty Bezels** ensure a longer display life.
- ▶ **Polycarbonate Viewing Windows** are scratch-resistant.
- ▶ **Touchscreen Options** are available for every industrial environment.
- ▶ **Powder-coated Aluminum Bezels** can be provided with custom colors.  
*(Private labeling for OEM manufacturers is also available.)*
- ▶ **Stainless Steel Bezels** come standard with a #4 satin brush finish.
- ▶ **Available from Stock**
- ▶ **Standard 3 year warranty**
- ▶ **UL/cUL/CB Listed, Type 12/4 and 12/4/4X (IP 65/66)**



### • Industrial Strength

STRONGARM's PanelMount 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 and are protected by polycarbonate windows, they remain secure and protected from any environment.

### • Current Technology

STRONGARM displays use the most current technology available. You can be sure that the STRONGARM display you purchase today is not yesterday's trailing edge.

STRONGARM's unique combination of technology and industrial design makes us the industry leader in quality HMI products for every application.

## 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.

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

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

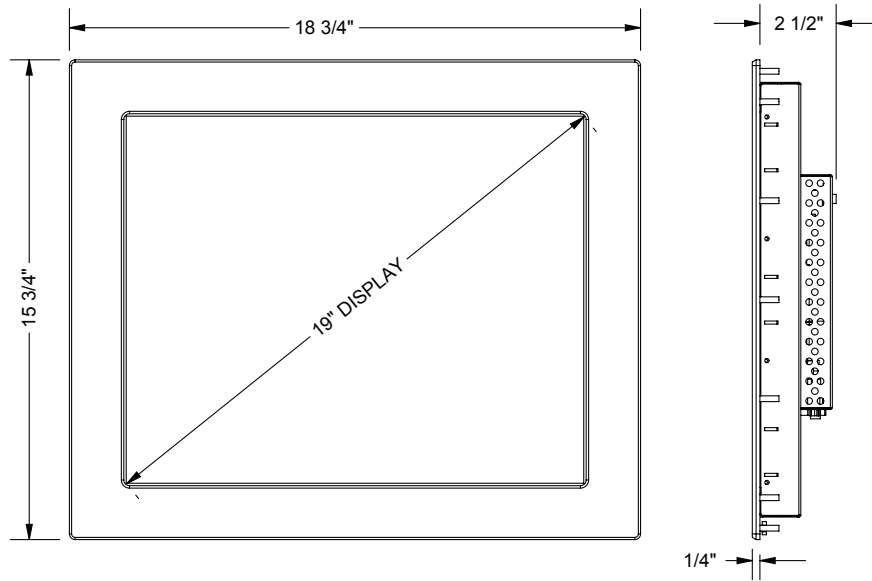
<b>Touch Activation Force</b>	2 to 3 ounces (55 to 85 grams), typical
<b>Accuracy</b>	Extremely consistent, very stable, no drift
<b>Touchpoint Density</b>	4096 x 4096 touchpoints/inch
<b>Temperature</b>	Exceeds display rating

# STRONGARM®

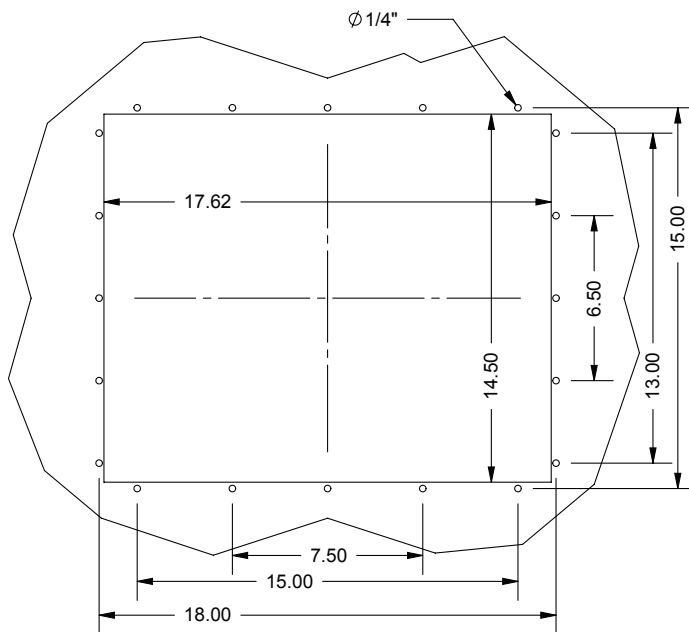
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## Dimensions



## Cut-out Dimensions



CUTOUT DETAIL

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## Specifications

### Display

<b>Size:</b>	19.1"
<b>Brightness:</b>	350 nits
<b>Contrast Ratio:</b>	1000:1
<b>Native Resolution:</b>	1280 x 1024
<b>Colors:</b>	16.7 M
<b>Video Inputs:</b>	VGA, DVI

### Power

<b>Consumption</b>	34W
<b>Input</b>	AC 100-240V~ 50/60Hz, DC 12V or 24V

### Physical

<b>Weight</b>	No Touchscreen:	NEMA 4/12: 16.5 lb (7.5 kg)	NEMA 4X: 20.9 lb (9.5 kg)
	Resistive Touchscreen:	NEMA 4/12: 17.5 lb (7.9 kg)	NEMA 4X: 19.9 lb (9.0 kg)
	IR Touchscreen:	NEMA 4/12: 17.6 lb (8.0 kg)	NEMA 4X: 22.1 lb (10.0 kg)

### Environmental

#### Operating Conditions

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

#### Storage Conditions

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

## Ordering Information

### NEMA Series

<b>304</b>	NEMA 4/12
<b>404</b>	NEMA 4X

### Touchscreens

<b>0</b>	None
<b>T</b>	Resistive
<b>R</b>	Infrared
<b>P</b>	Projected Capacitive

### Display Power Input

<b>A</b>	120-240V AC
<b>D</b>	12VDC
<b>V</b>	12VDC





**LISTED** 4SG4

Strongarm Designs  
425 Caredean Drive  
Ph: (215) 443-3400

**STRONGARM®**

Model: 19.1 Industrial Monitor  
100-240 VAC/50-60 HZ 1.4A  
P/N: XXX-191XGX  
MFG Date:

[www.strongarm.com](http://www.strongarm.com)

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