ET2239L 22″ LCD Touchmonitor User Guide

Elo TouchSystems

ET2239L 22" LCD Touchmonitor

User Guide

Revision D

Table of Contents

1

INTRODUCTION

About the Product

Your new ET2239L Elo TouchSystems Touchmonitor combines the reliable performance of touch technology with the latest advances in Liquid Crystal Display (LCD) design. The monitor comes with the following features:

- 22" color active matrix thin-film-transistor (TFT) with a native resolution of 1680 X 1050.

- Available in Acoustic Pulse Recognition (APR), IntelliTouch, SecureTouch, and Surface Capacitive touch technologies.

- All monitors have VGA video data inputs and, depending upon the PIP Part Description (indicating geographical area where monitors are sold), some monitors have DVI-D video data inputs.

- All touch technologies come with USB and serial interfaces, except for APR, which only comes with a USB interface.

For more detailed information, please visit our website: **www.elotouch.com**.

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INSTALLATION AND SETUP

This chapter discusses how to install and set up your LCD
touchmonitor and how to install Elo TouchSystems driver software.

Unpacking Your Touchmonitor

Check that the following items are present and in good condition:

Touchmonitor

Power cable
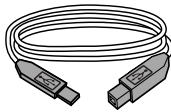
USB Cable
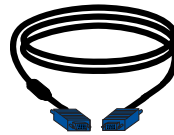
Analog Video

DVI-D cable
(not included with
ET2239L-xxxx-x-A-x
models)
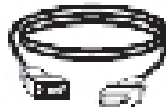
Serial Cable
(not included with
ET2239L-Axxx
models)

OSD Control Box
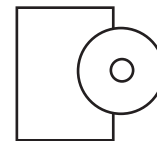
CD and Quick Install Guide

Interface Connection

Connector Panel on Rear side of Monitor
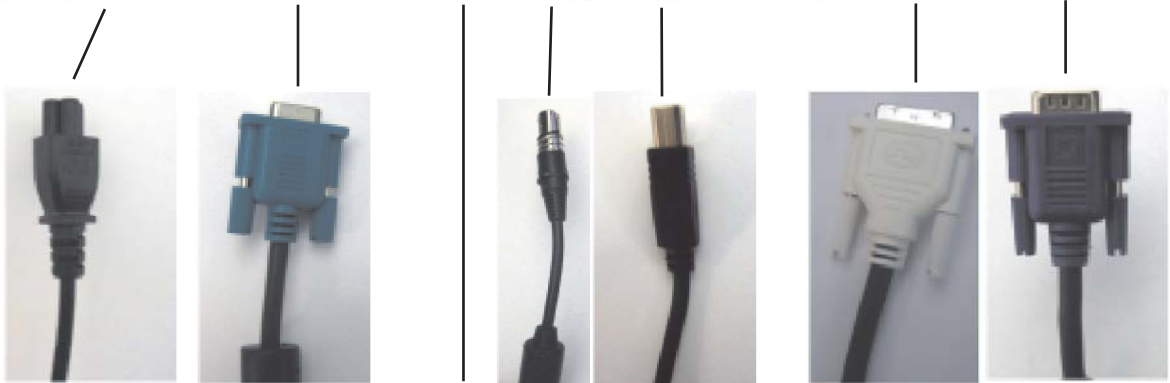
| Power Cable | Serial Cable (not included with ET2239L-Axxx models) | Power Button | OSD box connector | USB cable | DVI-D cable (not included with ET2239L-xxxx-x-A-x models) | Analog Video Cable |

To connect your touchmonitor to your computer:

1 Connect the power cable to the rear panel of the monitor and the other end to the power outlet.

2 Connect either the USB cable **OR** the serial cable to the rear panel of the monitor. *Note: Do not use both.* Connect the other end to your computer.

3 Connect the video cable **and/or** the DVI-D cable to the rear panel of the monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding. Connect the other end to your computer.

4 Connect the OSD control box to the monitor.

5 Press the power button on the rear panel to turn the monitor on.

Installing the Touch Driver

Your Elo touchmonitor is Plug-and-Play compliant. Information on the video capabilities of the touchmonitor is sent to the video display adapter when Windows starts. If Windows detects the touchmonitor, follow the instructions on the screen to install a generic Plug-and-Play monitor.

Elo TouchSystems provides touch driver software that allows your touchmonitor to work with your computer. Drivers are located on the enclosed CD for the following operating systems:

• Windows XP
• Windows 2000
• Windows Me
• Windows 98
• Windows 95
• Windows NT 4.0

The latest versions of drivers and driver information for other operating systems are available on the Elo TouchSystems web site at **www.elotouch.com/support/downloads/**.

To install the Touch Driver for Windows XP, Windows 2000, Me, and 98, follow the steps below:

NOTE: For Windows XP and Windows 2000 you must have administrator access rights to install the driver.

1   Insert the Elo CD-ROM in your computer's CD-ROM drive.

If Windows XP, Windows 2000, Windows 98, or Windows Me start the Add New Hardware Wizard, follow these steps (if it does not open, follow steps 1a through 2a):

2 Choose **Next**. Select "Search for the best driver for your device (Recommended)" and choose **Next**.

3 When a list of search locations is displayed, place a checkmark on "Specify a location" and use **Browse** to select the \EloUSB directory on the Elo CD-ROM.

4 Choose *Next*. Once the Elo TouchSystems touchscreen driver has been detected, choose **Next** again.

5 You will see several files being copied. Insert your Windows 98 CD if prompted. Choose **Finish**.

If Windows XP, Windows 2000, Windows 98, or Windows Me does **not** *start the Add New Hardware Wizard:*

1a Insert the Elo CD-ROM in your computer's CD-ROM drive. If the AutoStart feature for your CD-ROM drive is active, the system automatically detects the CD and starts the setup program.

2a Follow the directions on the screen to complete the driver setup for your version of Windows.

If the AutoStart feature is not active:

1 Click **Start** > **Run**.

2 Click the *Browse* button to locate the EloCd.exe program on the CD-ROM.

3 Click **Open**, then **OK** to run EloCd.exe.

4 Follow the directions on the screen to complete the driver setup for your version of Windows.

Monitor Mounting Orientation

When the monitor is mounted in the landscape orientation, the cable connection panel must be at the bottom, as shown in the illustration below.

Rear View of Monitor—Landscape Orientation
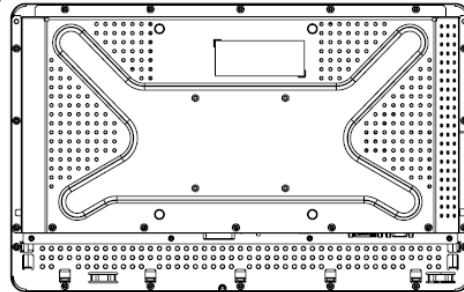
Cable connection panel must be at the bottom for proper mounting of the monitor.

Alternatively, the monitor may be mounted in the portrait orientation. For this orientation, the cable connection panel may be on either side, as shown in the illustrations below.

Rear View of Monitor—Portrait Orientation
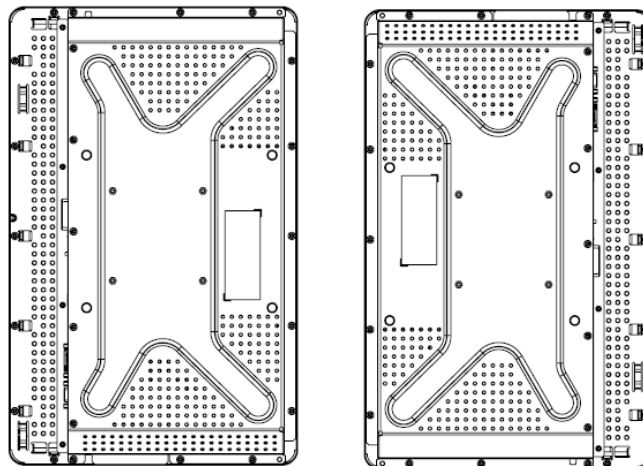
Landscape Mounting Orientation Angle Views

The mounting orientation can be up to a 90° angle from vertical, as shown in the illustrations below.

90°

90°
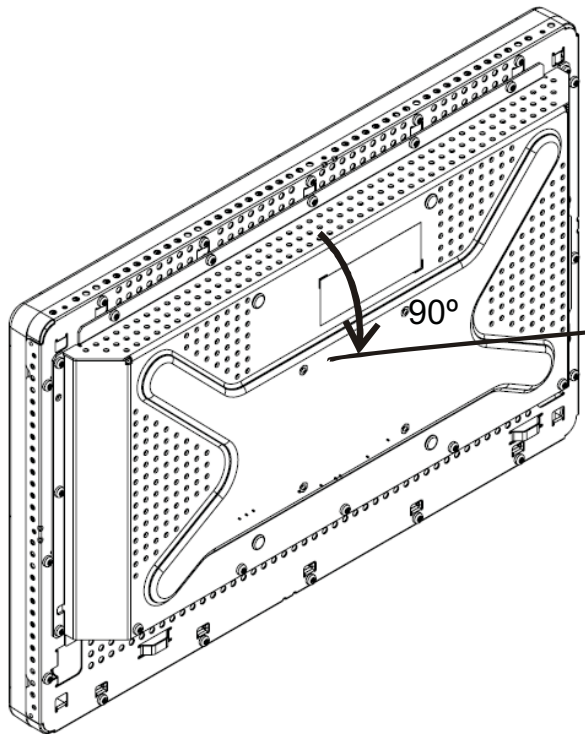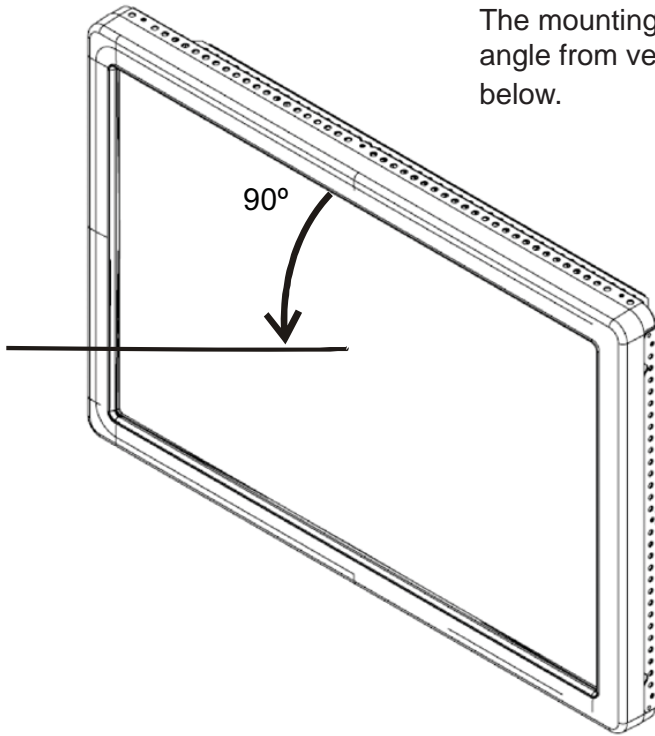
Portrait Mounting Orientation Angle Views

The mounting orientation can be up to a 90°
angle from vertical, as shown in the illustration
below.

90°
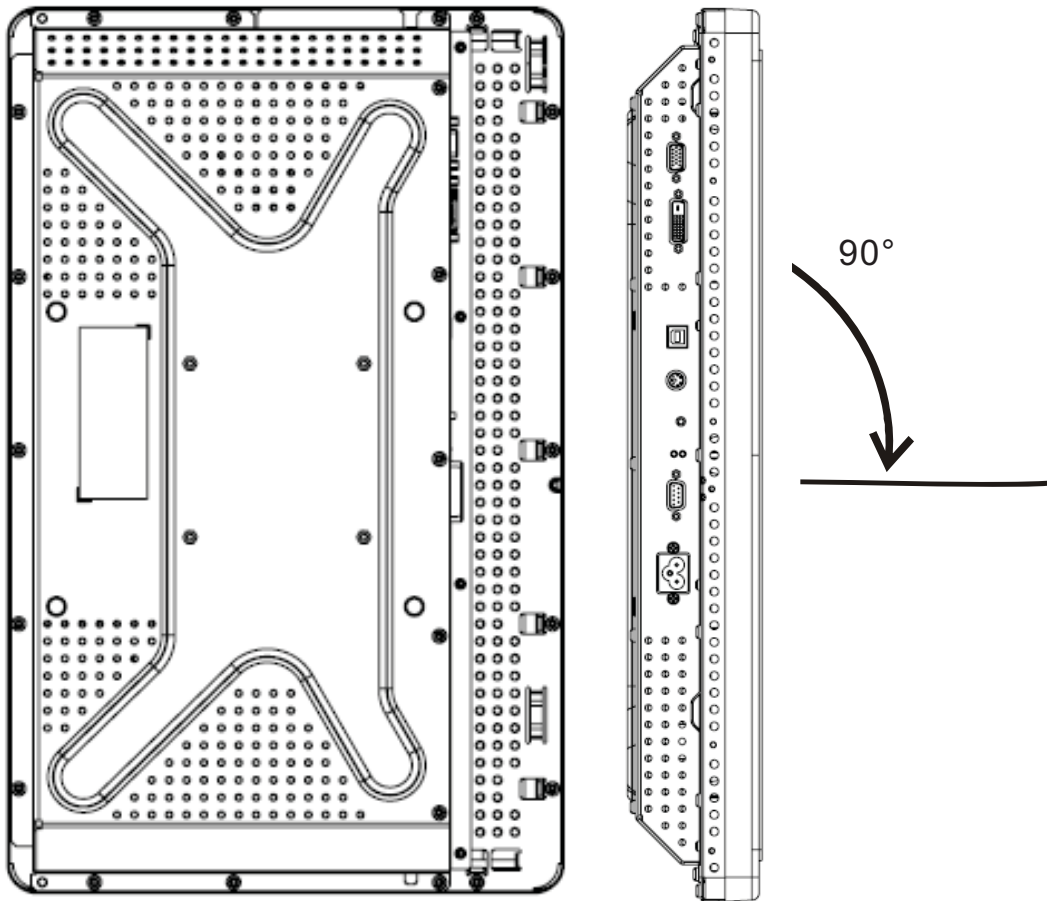
3

OPERATION

About Touchmonitor Adjustments

Your touchmonitor will probably not require adjustment. However, variations in video output and application may require adjustments to your touchmonitor to optimize the quality of the display.

For best performance, your video source should be at 1680 X 1050 resolution, at 60Hz vertical frame rate. Operating in other resolutions will degrade video performance.

For input video outside the vertical frame rate and dot clock ranges, the monitor will not automatically adjust, but will display an "Out of Range" (OOR) message and the OSD menu will be disabled.

Note: Do not operate the touchmonitor if you see the OOR message, or LCD damage may result. If you see the OOR message, set the video mode to one within the allowable range.

On-Screen Display (OSD) Control Box

OSD Control Buttons
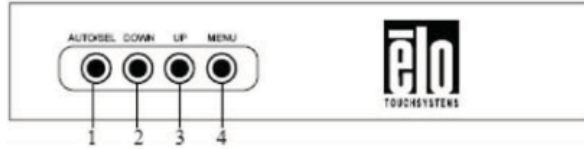
The On-Screen Display (OSD) Control Box, included with your shipment, allows you to change settings on the monitor screen. It has four buttons:

1	**AUTO/SEL** (select)
2	**DOWN**
3	**UP**
4	**MENU**

OSD Menu Functions

Use the control buttons for the following functions:

Control	Function
MENU	Displays/exits the OSD Menus
UP	1) Enters contrast of the OSD (if no OSD is currently displayed on screen)
	2) Increases value of OSD adjustment choice
	3) Selects OSD choice counterclockwise
DOWN	1) Enters brightness adjustment (if no OSD is currently displayed on screen)
	2) Decreases value of OSD adjustment choice
AUTO/SEL	1) Automatically adjusts the image on the screen (this function not available for ET2239L-xxEx models)
	2) Selects adjustment choices from the OSD menus.

After adjusting the values, the monitor will automatically save the changes.

You are able to lock and unlock the OSD feature. When the OSD is locked, no OSD can be displayed or used. The monitor is shipped in the unlocked position.

To lock the OSD:

1 Press the **MENU** button and **UP** button simultaneously for 2 seconds. A window will appear displaying "OSD Unlock."

2 Continue to hold the buttons down for another 2 seconds and the window toggles to "OSD Lock."

Power Lock/Unlock

You are able to lock/unlock the Power feature. When the power is locked, pressing the power switch will not turn off the monitor. The monitor is shipped in the unlocked position. To lock the power:

1 Press the **MENU** button and the **DOWN** button simultaneously for 2 seconds. A window will appear displaying "Power Unlock."

2 Continue to hold the buttons down for another 2 seconds and the window toggles to "Power Lock."

> *NOTE:* By default, the OSD screen will disappear if no input activities are detected for 30 seconds.

OSD Control Options

Auto Adjust
- • Automatically adjusts video timing parameters (*of VGA video only*).

Luminance

    Brightness
- • Adjusts the brightness.

    Contrast
- • Adjusts the contrast.

Geometry (VGA only)

    H-position
- • Moves the image left or right on the screen.

    V-position
- • Moves the image up or down on the screen.

    Clock
- • Stretches the image horizontally.

    Phase
- • Adjusts the phase of the dot clock to image data.

Color
- • Sets the color temperature.

Input Select
- • Selects between VGA and DVI input signals (not available for ETWL-xxxx-x-A-x models).

OSD

    OSD H-Position
- • Adjusts the OSD menu screen left or right.

    OSD V-Position
- • Adjusts the OSD menu screen up or down.

    OSD Timeout
- • Adjusts amount of time that the OSD menu is displayed.

Language
- • Selects the language used for the OSD menu from English, French, German, Spanish, Italian, Traditional Chinese, Simplified Chinese, or Japanese.

Recall

    Recall Color

        • Restores default color temperature settings.

    Recall Defaults

        • Restores original factory settings for H-position, V-position, Clock, and Phase for the current video mode (*VGA only*).

        • Restores original factory settings for all other parameters and video inputs, except language (*VGA and DVI*).

Miscellaneous

    Sharpness

        • Adjusts sharpness of video.

    Display Information

        • Frequency of the input horizontal/vertical synchronizing signal is indicated.

Preset Display Modes

The monitor comes with preset settings for commonly used video modes. It will automatically adjust the picture size and centering for any of the video modes listed in *Appendix B, ET2239L Specifications* table, under "Preset Display Modes."

If you make any adjustments to the H-position, V-Position, Clock and Phase video settings via the OSD in a preset display mode, those changes will be automatically saved for that display mode and recalled for any future use of that display mode. Selecting "Restore Factory Defaults" will revert to the factory default setting for changes to the preset video mode in which you are currently operating.

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TROUBLESHOOTING

If you are experiencing trouble with your touchmonitor, refer to the following table. If the problem persists, please contact your local dealer or our service center. Elo Technical Support numbers are listed on page 33.

Solutions to Common Problems

Problem	Suggestion(s)
The monitor does not respond after you turn on the system	Check that the monitor's Power Switch is on. Turn off the power and check the monitor's power cord and signal cable for proper connection.
Characters on the screen are dim	Refer to the *On-Screen Display (OSD) Control Box* section to adjust the brightness.
The screen is blank	During operation, the monitor screen may automatically turn off as a result of a computer Power Saving feature. Press any key to see if the screen reappears. Refer to the *On-Screen Display (OSD) Control Box* section to adjust the
Screen flashes when initialized	Turn the monitor off, then turn it on again.
"Out of Range" display	Check to see if the video mode or vertical frequency of your video source is outside the range of the touchmonitor. See Chapter 3 and Appendix B for more information on allowable video modes.
Touch doesn't work	Make sure the USB or serial cable is securely attached at both ends.

A

TOUCHMONITOR SAFETY

This manual contains information that is important for the proper setup and maintenance of your touchmonitor. Before setting up and powering on your new touchmonitor, read through this manual, especially Chapter 2 (Installation and Setup), and Chapter 3 (Operation).

1 To reduce the risk of electric shock, follow all safety notices and never open the touchmonitor case.

2 Turn off the product before cleaning. (Please refer to page 22 for proper cleaning methods.)

3 Your new touchmonitor is equipped with a 3-wire, grounding power cord. The power cord plug will only fit into a grounded outlet. Do not attempt to fit the plug into an outlet that has not been configured for this purpose. Do not use a damaged power cord. Use only the power cord that comes with your Elo TouchSystems Touchmonitor. Use of an unauthorized power cord may invalidate your warranty.

4 The slots located on the sides and top of the touchmonitor case are for ventilation. Do not block or insert anything inside the ventilation slots.

5 It is important that your touchmonitor remains dry. Do not pour liquid into or onto your touchmonitor. If your touchmonitor becomes wet do not attempt to repair it yourself.

Care and Handling of Your Touchmonitor

The following tips will help keep your Elo touchmonitor functioning at the optimal level.

• To avoid risk of electric shock, do not disassemble the touchmonitor. The unit is not user serviceable. Remember to unplug the touchmonitor from the power outlet before cleaning.

• Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air.

• To clean the display unit cabinet, use a cloth lightly dampened with a mild detergent.

• Avoid getting liquids inside your touchmonitor. If liquid does get inside, have a qualified service technician check it before you power it on again.

• Do not wipe the screen with a cloth or sponge that could scratch the surface.

• To clean the touchscreen, use window or glass cleaner. Put the cleaner on the rag and wipe the touchscreen. *Never* apply the cleaner directly on the touchscreen.

Warning

This product consists of devices that may contain mercury, which must be recycled or disposed of in accordance with local, state, or federal laws. (Within this system, the backlight lamps in the monitor display contain mercury.)

Waste Electrical and Electronic Equipment (WEEE) Directive

In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

B

TECHNICAL SPECIFICATIONS

ET2239L Specifications

Model	ET2239L
LCD Display	22" TFT Active Matrix Panel
Display Size	473.76(H) x 296.1(V) mm
Pixel Pitch	.282(H) x .282(V) mm
Preset Display Modes (require no user adjustments of image	640 x 480 @ 60Hz
	640 x 480 @ 66Hz
	640 x 480 @ 72Hz
	720 x 350 @ 70Hz
	720 x 400 @ 70Hz
	800 x 500 @ 75Hz
	800 x 600 @ 56Hz
	800 x 600 @ 60Hz
	800 x 600 @ 72Hz
	832 x 624 @ 75Hz
	1024 x 768 @ 60Hz
	1024 x 768 @ 65Hz
	1024 x 768 @ 72Hz
	1024 x 768 @ 75Hz
	1280 x 1024 @ 60Hz
	1280 x 1024 @ 75Hz
	1152 x 864 @ 75Hz
	1280 x 768 @ 65Hz
	1280 x 960 @ 60Hz
	1360 x 768 @ 60Hz
	1366 x 768 @ 60Hz
	1600 x 1200 @ 60Hz
	1680 x 1050 @ 60Hz
	1680 x 1050 @ 75Hz
Native Resolution	1680 x 1050
Contrast Ratio	1000:1 (typical)
Brightness	No Touch: Typical 270 cd/m^2; Min 212.5 cd/m^2 IntelliTouch: Typical 270 cd/m^2; Min 212.5 cd/m^2 Surface Capacitive: Typical 249 cd/m^2; Min 200 cd/m^2 APR: Typical 270 cd/m^2; Min 212.5 cd/m^2 Secure Touch: Typical 270 cd/m^2, Min 212.5 cd/m^2
Response Time	Rising time: 3.6 ms (typical) Falling time: 1.4 ms (typical)

Display Color	16.7 Million
Viewing Angle	Vertical - 160°
	Horizontal - 170°
Input Video Signal	• RGB Analog Video (0.7V p-p, 75 ohm; separate syncs, composite sync, or sync-on-green; TTL positive or negative)
	• DVI Video (not available for ET2239L-xxxx-x-A-x models)
Video Signal Connector	Analog: 15 pin Female D-Sub
	Digital: Female DVI-D (not available for ET2239L-xxxx-x-A-x models)
Input Video Range	Horizontal scan frequency: 30 to 75KHz
	Vertical frame rate range: 56 to 75Hz
	Dot clock range: less than 85MHz
Plug & Play	DDC1 and DDC2B
Touch Technology (optional)	IntelliTouch, Surface Capacitive, or Acoustic Pulse Recognition
Power Input	100–240Vac, 50/60Hz, 2.5A
Operating Conditions	Temp: 0°C to 40°C
	Humidity: 20% to 80% (No Condensation)
	Altitude: 0 to 3,658 m
Storage Conditions	Temp: -20°C to 60°C
	Humidity: 10% to 90% (No Condensation)
	Altitude: 0 to 12,192 m
Dimensions (HxWxD)	352 x 530 x 78 mm
Weight (unpackaged)	8.48 kg

ET2239L 22″ LCD Touchmonitor Dimensions
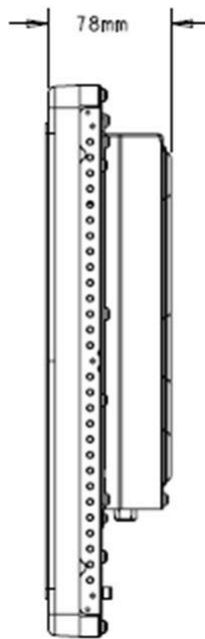
Note: Detailed mechanical files can be found at:
www.elotouch.com

REGULATORY INFORMATION

I. Electrical Safety Information:

> A) Compliance is required with respect to the voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified herein will likely result in improper operation, damage to the equipment, invalidation of warranty, or a fire hazard if the requirements are not followed.
>
> B) There are no operator serviceable parts inside this equipment. There are hazardous voltages generated by this equipment which constitute a safety hazard. Service should be provided only by a qualified service technician.
>
> C) This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
>
>> 1) Do not substitute the cord with other than the provided approved type. Under no circumstances use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
>>
>> 2) The equipment requires the use of the ground wire as a part of the safety certification. Modification or misuse can provide a shock hazard that can result in serious injury or death.
>>
>> 3) Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment to main power.

II. Emissions and Immunity Information

> A) Notice to Users in the United States: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential or commercial installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

B) Notice to Users in Canada: This equipment complies with the Class A limits for radio noise emissions from digital apparatus as established by the Radio Interference Regulations of Industry Canada.

C) Notice to Users in the European Union: Use only the provided power cords and interconnecting cabling provided with the equipment. Substitution of provided cords and cabling may compromise electrical safety or CE Mark Certification for emissions or immunity as required by the following standards: This Information Technology Equipment (ITE) is required to have a CE Mark on the manufacturer's label which means that the equipment has been tested to the following Directives and Standards:

This equipment has been tested to the requirements for the CE Mark as required by EMC Directive 89/336/EEC indicated in European Standard EN 55022 Class A and the Low Voltage Directive 73/23/EEC as indicated in European Standard EN 60950.

D) General Information to all Users: This equipment generates, uses and can radiate radio frequency energy. If not installed and used according to this manual, the equipment may cause interference with radio and television communications. There is, however, no guarantee that interference will not occur in any particular installation due to site-specific factors.

1) In order to meet emission and immunity requirements, the user must observe the following:

a) Use only the provided I/O cables to connect this digital device with any computer.

b) To ensure compliance, use only the provided manufacturer's approved line cord.

c) The user is cautioned that changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2) If this equipment appears to cause interference with radio or television reception, or any other device:

a) Verify as an emission source by turning the equipment off and on.

b) If you determine that this equipment is causing the interference, try to correct the interference by using one or more of the following measures:

  i) Move the digital device away from the affected receiver.

  ii) Re-position (turn) the digital device with respect to the affected receiver.

  iii) Reorient the affected receiver's antenna.

  iv) Plug the digital device into a different AC outlet so the digital device and the receiver are on different branch circuits.

  v) Disconnect and remove any I/O cables that the digital device does not use. (Unterminated I/O cables are a potential source of high RF emission levels.)

  vi) Plug the digital device into only a grounded outlet receptacle. Do not use AC adapter plugs. (Removing or cutting the line cord ground may increase RF emission levels and may also present a lethal shock hazard to the user.)

  vii) If you need additional help, consult your dealer, manufacturer, or an experienced radio or television technician.

III. Safety Label

This device is not intended for use at visual display workplaces in compliance with BildscharbV.

The following marks have been issued for the unit and appear on the safety label as shown in the illustration below:

WARRANTY

Except as otherwise stated herein or in an order acknowledgment delivered to Buyer, Seller warrants to Buyer that the Product shall be free of defects in materials and workmanship. With the exception of the negotiated warranty periods; the warranty for the touchmonitor and components of the product is 3 years.

Seller makes no warranty regarding the model life of components. Seller's suppliers may at any time and from time to time make changes in the components delivered as Products or components. Buyer shall notify Seller in writing promptly (and in no case later than thirty (30) days after discovery) of the failure of any Product to conform to the warranty set forth above; shall describe in commercially reasonable detail in such notice the symptoms associated with such failure; and shall provide to Seller the opportunity to inspect such Products as installed, if possible. The notice must be received by Seller during the Warranty Period for such product, unless otherwise directed in writing by the Seller. Within thirty (30) days after submitting such notice, Buyer shall package the allegedly defective Product in its original shipping carton(s) or a functional equivalent and shall ship to Seller at Buyer's expense and risk.

Within a reasonable time after receipt of the allegedly defective Product and verification by Seller that the Product fails to meet the warranty set forth above, Seller shall correct such failure by, at Seller's options, either (i) modifying or repairing the Product or (ii) replacing the Product. Such modification, repair, or replacement and the return shipment of the Product with minimum insurance to Buyer shall be at Seller's expense. Buyer shall bear the risk of loss or damage in transit, and may insure the Product. Buyer shall reimburse Seller for transportation cost incurred for Product returned but not found by Seller to be defective. Modification or repair, of Products may, at Seller's option, take place either at Seller's facilities or at Buyer's premises. If Seller is unable to modify, repair, or replace a Product to conform to the warranty set forth above, then Seller shall, at Seller's option, either refund to Buyer or credit to Buyer's account the purchase price of the

Product less depreciation calculated on a straight-line basis over Seller's stated Warranty Period.

THESE REMEDIES SHALL BE THE BUYER'S EXCLUSIVE REME-DIES FOR BREACH OF WARRANTY. EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, SELLER GRANTS NO OTHER WARRANTIES, EXPRESS OR IMPLIED BY STATUTE OR OTHER-WISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PURPOSE, THEIR QUALITY, THEIR MERCHANTABILITY, THEIR NONINFRINGEMENT, OR OTHERWISE. NO EMPLOYEE OF SELL-ER OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WAR-RANTY FOR THE GOODS OTHER THAN THE WARRANTY SET FORTH HEREIN. SELLER'S LIABILITY UNDER THE WARRANTY SHALL BE LIMITED TO A REFUND OF THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT SHALL SELLER BE LIABLE FOR THE COST OF PROCUREMENT OR INSTALLATION OF SUBSTI-TUTE GOODS BY BUYER OR FOR ANY SPECIAL, CONSEQUEN-TIAL, INDIRECT, OR INCIDENTAL DAMAGES.

Buyer assumes the risk and agrees to indemnify Seller against and hold Seller harmless from all liability relating to (i) assessing the suit-ability for Buyer's intended use of the Products and of any system design or drawing and (ii) determining the compliance of Buyer's use of the Products with applicable laws, regulations, codes, and stan-dards. Buyer retains and accepts full responsibility for all warranty and other claims relating to or arising from Buyer's products, which include or incorporate Products or components manufactured or supplied by Seller. Buyer is solely responsible for any and all representations and warranties regarding the Products made or authorized by Buyer. Buyer will indemnify Seller and hold Seller harmless from any liability, claims, loss, cost, or expenses (including reasonable attorney's fees) attributable to Buyer's products or representations or warranties con-cerning same.

Check out Elo's Website!

www.elotouch.com

Get the latest...

• *Product information*

• *Specifications*

• *News on upcoming events*

• *Press release*

• *Software drivers*

• *Touch Monitor Newsletter*

Getting in Touch with Elo

To find out more about Elo's extensive range of touch solutions, visit our Website at www.elotouch.com or simply call the office nearest you:

North America	Germany	Belgium	Asia-Pacific
Elo TouchSystems	Tyco Electronics Raychem GmbH	Tyco Electronics Raychem N.V.	Sun Hamada Bldg. 2F
301 Constitution Drive	(Elo TouchSystems Division)	(Elo TouchSystems Division)	1-19-20 ShinYokohama
Menlo Park, CA 94025	Finsinger Feld 1	Diestsesteenweg 692	Kanagawa 222-0033
USA	D-85521 Ottobrunn	B-3010 Kessel-Lo	Japan
	Germany	Belgium	
(800) ELO-TOUCH	Tel +49 (0)(89) 60822-0	Tel +32(0)(16)35 21 00	Tel +81(45)478-2161
(800) 356-8682	Fax +49(0)(89) 60822-180	Fax +32(0)(16)35 21 01	Fax +81(45)478-2180
Tel 650-361-4800	elosales@elotouch.com	elosales@elotouch.com	www.tps.co.jp
Fax 650-361-4747			
eloinfo@elotouch.com			

Tyco Electronics

Our commitment. Your advantage.