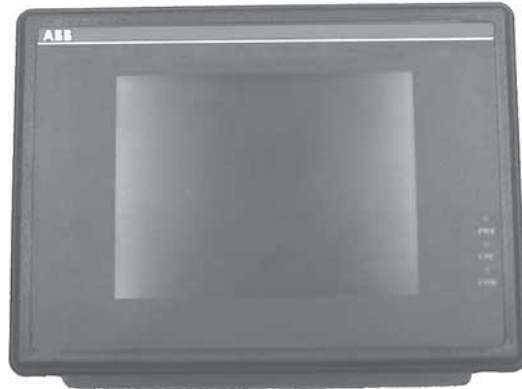


Touch screens & computers



CX Series touch screens
CE Series computers



10

Index

CE Series computers.....	10.9 - 10.10
CX Series touch screens	10.2 - 10.8
Dimensions, CE Series computers.....	10.10
Ordering information, CX Series touch screens	10.8
Setup, CX Series touch screens.....	10.6 - 10.7
Technical data, CX Series touch screens	10.4 - 10.5

CX Series touch screens

Graphic user interface panels with touch screens

CX552, CX554-1 & CX554-2

Features

- LCD Graphic display with touch panel
- 5.7" Blue Monochrome and 5.7" STN, TFT color
- Connects to today's popular PLCs via single cable to programming port
- Free Design Mode, Windows™ based setup software included
- 24 VDC powered
- Ethernet & printer port included on color models

LCD with touch panel

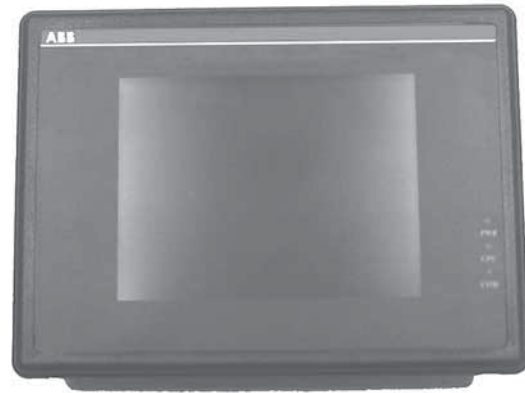
The CX552, CX554-1 and CX554-2 are touch screen interfaces for programmable controllers and are designed for harsh industrial environments. They connect directly to most PLCs and do not require the PLC to run any special program for data communication. This greatly reduces PLC programming time. The units display pictorial information, data and messages that are preloaded with a personal computer. Touch screen areas can be programmed to perform various functions.

Free setup software for configuring the displays is included with each unit. The Display Magic Screen Editor software takes advantage of Microsoft Windows graphical interface and object oriented scheme. It offers fast and intuitive configuration. This simplifies application design while reducing development costs.

Connect directly to most PLCs

The CX Series uses each PLC's communication protocol to read or write data. They do not require the PLC to run any special program for data communication. The CX500 Series allows the user to optimize communications by selecting the data block size that is uploaded with each communication to the PLC.

The Display Magic Simulation Window utility that is provided along with Display Magic has tools to further monitor and tweak PLC communication efficiencies.



10

CX Series Touchscreen features

- Exceptionally versatile analog graphics
- Easy to learn programming
- Drivers for most makes of PLCs
- Color units include Ethernet and printer ports
- Powerful extended Modbus master allows management of multiple intelligent devices via Fieldbus plug. No PLC required.
- Software, programming cable & manual included
- LCD Graphic display with touch panel
- 5.7" Blue Monochrome and 5.7" STN, TFT Color
- Connects to today's popular PLCs via single cable to programming port
- Free Design Mode, Windows™ based setup software included.
- Ethernet & printer port included on color models

CX Series touch screens

Graphic user interface panels with touch screens

CX554-3, CX555 & CX555M

computers & s

Features

- LCD Graphic display with touch panel
- 7.7" and 10.4" displays, TFT color and monochrome
- Connects to today's popular PLCs via single cable to programming port. Printer port included.
- Free Design Mode, Windows™ based setup software included
- 24 VDC powered
- Ethernet port included on color models

LCD with touch panel

The CX552, CX554-1 and CX554-2 are touch screen interfaces for programmable controllers and are designed for harsh industrial environments. They connect directly to most PLCs and do not require the PLC to run any special program for data communication. This greatly reduces PLC programming time. The units display pictorial information, data and messages that are preloaded with a personal computer. Touch screen areas can be programmed to perform various functions.

Free setup software for configuring the displays is included with each unit. The Display Magic Screen Editor software takes advantage of Microsoft Windows graphical interface and object oriented scheme. It offers fast and intuitive configuration. This simplifies application design while reducing development costs.

Connect directly to most PLCs

The CX Series uses each PLC's communication protocol to read or write data. They do not require the PLC to run any special program for data communication. The CX500 Series allows the user to optimize communications by selecting the data block size that is uploaded with each communication to the PLC.

The Display Magic Simulation Window utility that is provided along with Display Magic has tools to further monitor and tweak PLC communication efficiencies.



10

CX Series touch screens

Technical data

CX554-2, CX554-1 & CX552

General specifications

Item	Specification
Input power	21-25 VDC, 500mA @ 24VDC
CE	Complies with EN50081-2 and EN50082-2 standards
EMI	Complies with FCC Class A (Ferrite core required if using unshielded power supply wires)
Isolation resistance	Exceeds 50 MΩ at 500VDC
Vibration endurance	10 to 25 Hz (X, Y, Z direction 2G 30 minutes)
Protection structure	NEMA 4/IP65 front panel (when mounted with gasket seal)
Operating temperature	32°F to 113°F (0°C to 45°C)
Operation humidity	10% to 90% RH non--condensing
Enclosure	Plastic: Polybutylene Terephthalate (PBT) and Polycarbonate (PC)

Hardware specifications

Item	CX554-2	CX554-1	CX552
LCD Display	5.7" TFT 256 color	5.7" STN 256 color	5.7" STN blue mode
Contrast ratio	60:1	30:1	15:1
Brightness cd/m2	300	150	60
Back light CCFLx1 ①	MTBF 40,000 hr	MTBF 25,000 hr	MTBF 15,000 hr
Resolution pixels	320 (W) x 240 (H)		
Pixel size	0.33 (W) x 0.33 (H) mm		
Display area (mm0	120 (W) x 90 (H)		
Touch panel	4 wire resistive type		
Touch granularity	2mm grid		
Touch feedback	Beeper and or graphic indicator		
Surface hardness	4H		
Processor	32 bit RISC CPU 200 MHz		
Flash memory	1 MB standard, 2MB with Ethernet option		
System memory	4MB DRAM		
Battery held memory	128kB with Y2K compliant Real Time Clock/Calendar		
Compact flash slot	Used for project transfers only		Not Available
Serial ports	1 RS-232 (Controller port) 1 RS-232 / RS-485 (Combination PC & controller port)		
Parallel printer port	Compact D-Sub 15 Pin		No printer port
Ethernet port	RJ-45 8 wire (10 BaseT) TCP/IP		Not available
System diagnostic	Watch dog timer, power failure detection		
Dimensions	Bezel: 5.90 x 8.00 x 2.95" (150 x 204 x 75mm) Cutout: 5.43 x 7.56" (138 x 192mm)		
Weight	Approx. 0.8 kg		

Functional specifications

Screen editor	Display Magic Version 2.6.0 or later (to be run under Windows 98 / NT / 2000 / ME / XP)
No. of window	1 - 1999, limited by memory
No. of object	Up to 500 per window, limited by memory
Text strings	Limited only by memory
Bitmap graphics	256 KB per graphic, limited by memory
Support PLC	Most popular PLCs
Support printer	EPSON ESC/P2, HP PCL (Simple page mode) or compatible
Macro scripts	Up to 256 Macro scripts per project, limited by memory

① Backlight: Programmable auto shutdown.

CX Series touch screens

Technical data

CX555, CX555M & CX554-3

General specifications

Item	Specification
Input power	21-25 VDC, 500mA @ 24VDC
CE	Complies with EN50081-2 and EN50082-2 standards
EMI	Complies with FCC Class A (Ferrite core required if using unshielded power supply wires)
Isolation resistance	Exceeds 50 MΩ at 500VDC
Vibration endurance	10 to 25 Hz (X, Y, Z direction 2G 30 minutes)
Protection structure	NEMA 4/IP65 front panel (when mounted with gasket seal)
Operating temperature	32°F to 113°F (0°C to 45°C)
Operation humidity	10% to 90% RH non--condensing
Enclosure	Plastic: Polybutylene Terephthalate (PBT) and Polycarbonate (PC)

Hardware specifications

Item	CX555	CX555M	CX554-3
LCD Display	10.4" TFT 256 color	10.4" STN 4 color gray	7.7" STN 256 color
Display area	215(W) x 162(H)		162(W) x 123(H)
Contrast ratio	100:1	18:1	30:1
Brightness cd/m2	250	100	150
Back light	CCFLx2 (MTBF 25,000 hr)		CCFLx2 (MTBF 25,000 hr)
Resolution pixels	640 (W) x 480 (H)		
Pixel size	0.33 (W) x 0.33 (H) mm		
Display area (mm0	120 (W) x 90 (H)		
Touch panel	4 wire resistive type		
Touch granularity	2mm grid		
Touch feedback	Beeper and or graphic indicator		
Surface hardness	4H		
Processor	32 bit RISC CPU 200 MHz		
Flash ROM memory	2 MB standard, 4MB with Ethernet option		
System memory	4MB DRAM		
Battery held memory	128kB with Y2K compliant Real Time Clock/Calendar		
Compact flash slot	Used for project transfers only	Not Available	Used for Project transfers only
Serial ports	1 RS-232 (Controller port) 1 RS-232 / RS-232/RS-485 (PC & controller port)		
Parallel port	Standard parallel printer port		
Ethernet port	RJ-45 8 wire (10 BaseT TCP/IP)	Not available	RJ-45 8 wire (10 BaseT) TCP/IP
System diagnostic	Watch dog timer, power failure detection		
Dimensions	Bezel: 9.37 x 12.40 x 2.44" (238 x 315 x 62mm) Cutout: 8.86 x 11.89" (225 x 302mm)		Bezel: 6.93 x 9.09 x 2.16" (176 x 231 x 55) Cutout: 6.57 x 8.75" (167 x 222mm)
Weight	Approx. 2.0 kg		Approx 1.2 kg

Functional specifications

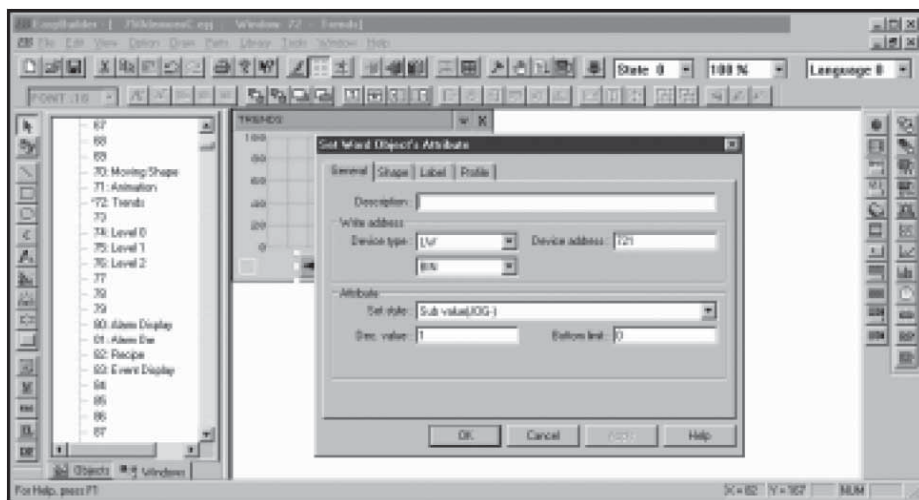
Screen editor	Display Magic Version 2.6.0 or later (to be run under Windows 98 / NT / 2000 / ME / XP)
No. of window	1 - 1999, limited by memory
No. of object	Up to 500 per window, limited by memory
Text strings	Limited only by memory
Bitmap graphics	256 KB per graphic, limited by memory
Support PLC	Most popular PLCs
Support printer	EPSON ESC/P2, HP PCL (Simple page mode) or compatible
Macro scripts	Up to 256 Macro scripts per project, limited by memory

CX Series touch screens Setup

Easy setup with Display Magic Software

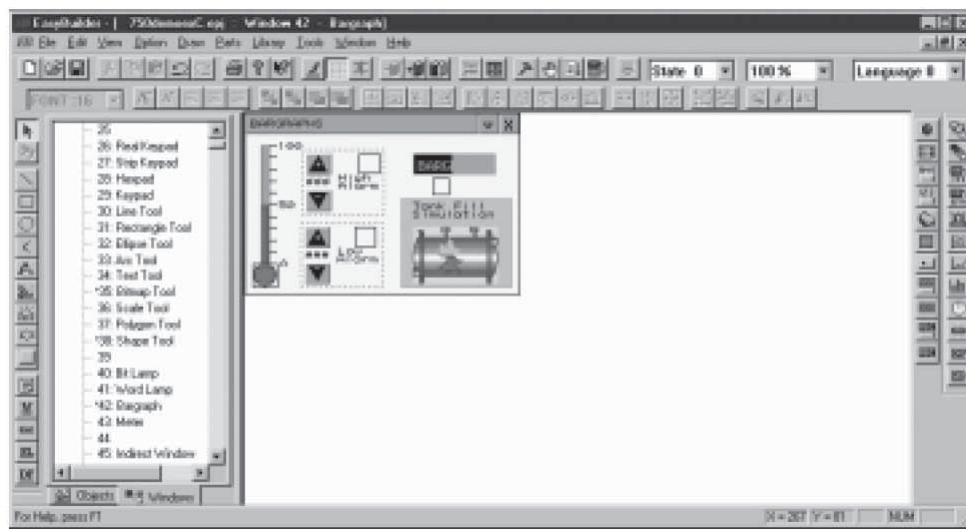
Display Magic is a graphics editor software program for configuring the CX500 Series. Typical projects are composed of user defined windows. Each window is composed of a variety of elements called objects. There are drawing objects for putting static and graphics on the window and Part objects for putting active objects on a window. PLC controlled objects can be used for window control and system functions.

Configuration of the CX500 Series is easy. To setup objects, select an icon from the toolbox, a dialog box appears. Fill in object attributes requested by the dialog to complete the object setup process. Move the object to the right position and drag the boundary of the object to resize it. It's a straightforward, simple and consistent process.



10

Graphics can be produced by using the Display Magic's own set of drawing tools. You can import any 256 color BMP format graphic into Display Magic to customize your application.. Screen Captures and Graphics may also be cut and pasted into Paintbrush for conversion to the BMP format. Libraries with over 300 commonly used graphics are included with Display Magic Software. These libraries can be edited and new libraries created to hold new graphics you have created.



Drawing tools

Line	Draw straight line
Rectangle	Draw squares and rectangles
Ellipse	Draw circles and ellipses
Arc	Draw 90-degree arcs
Polygon	Draw multi-sided objects
Text	Place static text
Scale	Place lines at regular intervals
Shape	Place a static shape from a library
Bitmap	Place a static bitmap from a library

CX Series touch screens Setup

Animation tools

Bit Lamp	Bit triggered indicators	Spot Move Animation	Move an object on a predefined path
Word Lamp	Word triggered indicators	Direct Window	Popup Window on Bit value
Set Bit	Set a bit	Indirect Window	Popup Window on Register value
Set Word	Set a word	Alarm Display	Display Alarms
Toggle Switch	Toggle a bit	Trend Graph	Trend Data Display
MultiState Switch	Increment/Decrement a word	XY Plot	Plot data
Function button	Change Window, Popup a window, Print the screen, create data entry keys, window and message board controls	BarGraph	Show a bargraph
Numeric Input Extend	Display/Change digital data	Meter	4 different meter styles
Numeric Display	Display digital data	Scrolling Alarm	Display Alarms
ASCII Input Extend	Display/Change alphanumeric data	Recipe Transfer	Transfer data to and from PLC
ASCII Display	Display alphanumeric data	Event Log	Display Events with Time and Date
X, Y Move Animation	Move an object via pixel coordinates	PLC Controls	Active Screen Control, Print Control, Data Transfer, Activate Macro, Backlight Control

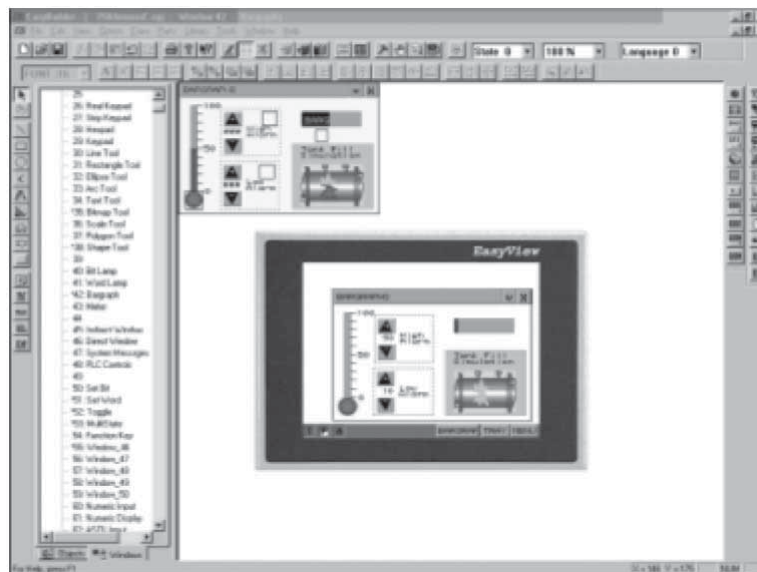
Other convenient features include:

- The ability to copy windows and objects between projects. Windows can be stacked (overlapped) to reduce duplicate objects.
- Tags can be assigned to Data points for easy reference during project development.
- Labels that change depending on language use can also be incorporated into the project giving it international compatibility.
- Macro scripts can be triggered by bit actions to perform calculations, data manipulation and logical operations. Up to 256 scripts can be programmed into the unit.
- The ability to use a system bar (Taskbar) at the bottom of the screen to emulate familiar graphic interface operations.
- The compact card slot allows a user to update the project in a unit without connecting a computer or some other programming device.
- The printer port can be used to print out screen captures and event or alarm information.
- The Ethernet port can be used for unit to unit communications or Modbus TCP/IP communications to controllers.

General

After completing a project, it can be simulated off-line to view approximately how your project will look and respond.

There is also an on-line simulation. Connect the PC to your CX500 unit and connect the CX500 to your PLC. The CX500 display is emulated on the PC screen by using the CX500 as a bridge to go to your PLC. The PC will mimic exactly how the CX500 will respond once the project is downloaded.



To download a project, connect the CX500 unit to COM1 or COM2 port of your PC using the download cable provided with the unit. Execute the download function; it will directly transfer your project data to the CX500's flash memory.

CX Series touch screens

Ordering information

Ordering information

Description	Catalog Number
Graphic Interface with 5.7" blue, 4 gray scale, LCD display and Touchscreen	CX552
Graphic Interface with 5.7" STN, 256 color, LCD display and Touchscreen	CX554-1
Graphic Interface with 5.7" TFT, 256 color display & touchscreen	CX554-2
Same as CX554-2 with Enhanced display for daylight viewing	CX554-HB

NOTE: Setup software and programming cable are included with each unit. The manual is on the CD as a PDF file. A printed copy of the manual is sent with each CX500 product order.

CE Series computers

Xscale touch panel computer with 5.7" QVGA CE-554, STN display LCD Display

computers s &

Introduction

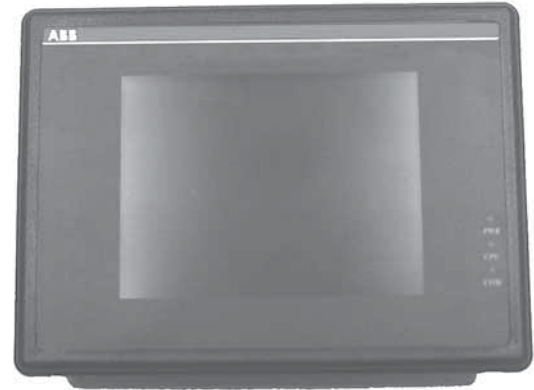
The CE-554 is a miniature and compact platform that has no redundant functions. It is designed for the small-sized operator interface market. It's RISC kernel, the Intel PXA255 200MHz processor, has low power consumption without performance sacrifice. The CE-554 has 10Base-T Ethernet port offering internet communication ability. This is offered as a Windows CE OS operator Interface solution. The built-in Windows CE OS platform forms a bridge that lets the CE-554 be an open HMI solution for system integration.

Features

- 5.7" QVGA STN LCD
- Intel® PXA255 200MHz processor
- Fanless cooling system
- Built-in flash memory and Windows CE OS inside
- NEMA 4/IP65 compliant front panel
- One CompactFlash™ slot
- Display type STN color LCD

Specifications

- Construction: Plastic molding housing
- Display: 5.7" QVGA Color STN LCD
- CPU: Intel® PXA255 200 MHz processor
- DRAM: 64 MB on board
- Storage: 32MB flash memory on board
- 1 CompactFlash™ card slot
- I/O: 3 serial ports:
 - Com1: RS232 full function
 - Com2: RS232
 - Com3: RS-485 2w/4w
- 1 Ethernet port (10Base-T)
- 1 USB client for ActiveSync
- Sound output: 16 bit sound output
- RTC: Built-in
- Power input: 24VDC, 0.5A maximum
- Dimensions: (W x H x D): 204 x 150 x 48mm
- Weight: 0.8 kg



10

LCD Display

Display size	(diagonal)	5.7"
Max colors		4096
Resolution		320 x 240
Pixel pitch	(HxV, mm)	0.36 x 0.36
Viewing angle	(°)	100
Luminance		150
Storage temperature	(°C)	-20 to +60
Operating temperature	(°C)	0 to +45
Backlight		1 CCFL
Contrast ratio		10:1

Touchscreen

Type	4-wire, analog resistive
Resolution	Continuous
Light transmission	above 80%
Life	1 million activation minimal

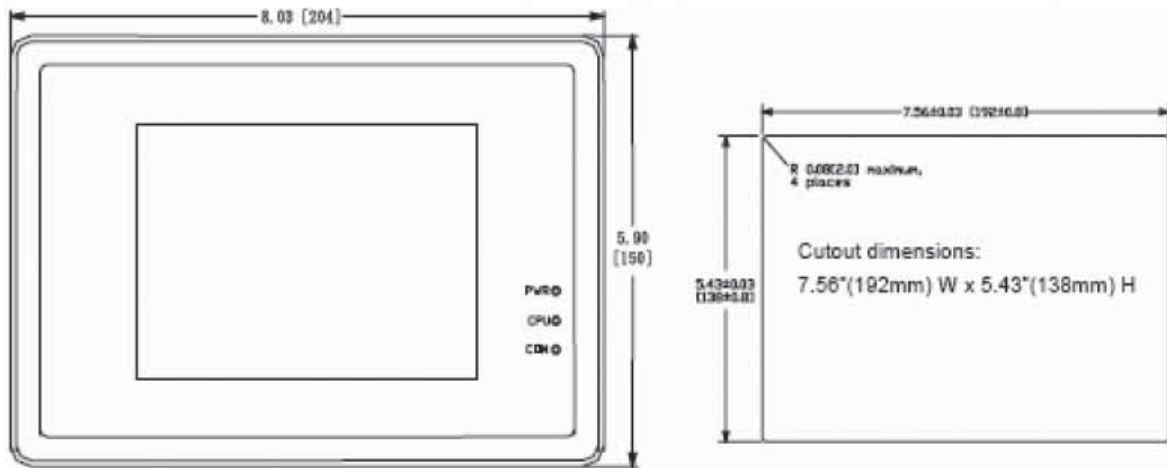
Environmental specifications

Operating temperature	0° - 45°C (32° - 133°F)
Relative humidity	10 - 90% @ 40°C, non-condensing
Shock (operation)	10 to 25 Hz (X, Y, Z direction 2G, 30 minutes)
EMI	Complies with FCC Class A
CE	Complies with EN50081-2 and EN50082-2 standards
Front panel	Meets NEMA4 x IP65

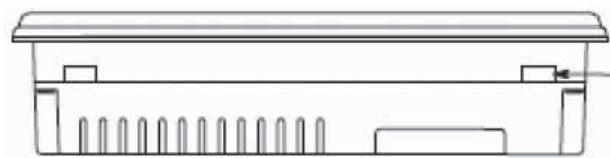
CE Series computers

Xscale touch panel computer with 5.7" QVGA, CE-554
Approximate dimensions

Front view

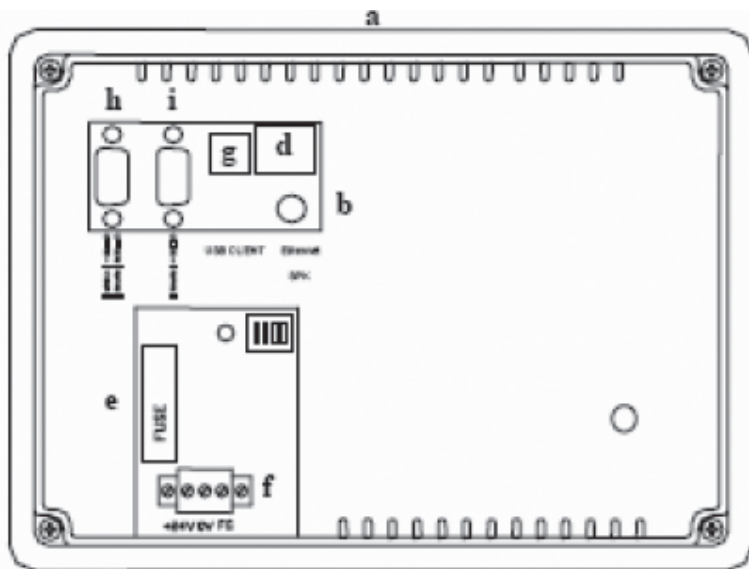


Front View



Panel Mounting Clamp 4 places

Rear view



Rear View

- a. CompactFlash™ slot
- b. Sound ports
- d. Ethernet port (RJ-45)
- e. Fuse
- f. Power connector
- g. USB client
- h. Com2[232] & Com3[485]
- i. Com1[232]